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THE WALNUT BURR.

The burr of the walnut tree, the most valuable and one of the most beautifully figured woods the world produces, is found principally in Persia. The trees of England rarely have much color on account of the climate not being sufficiently hot, but fine walnut trees are found in the south of France, Spain, Italy, and in the same latitude of Turkey, Circassia, and so on to Persia. The burr of the tree is an excrescence, similar to a wart on one's finger, which is supposed to result from disease, and is mostly found growing at the trunk, where it is formed into a mass of what is termed "tis," producing the magnificient figure which is seen on pianos and other furniture.

Few people even in the timber trade have any idea of the value of a fine large burr of superior color, size and soundness. These burrs weigh from about 500 weight to 2 tons or more, and some have been known to produce as much as £2,000 each.

Some 15 years ago walnut burrs were to be found in quantities around the neighborhood of the Black Sea, although not of the best quality, but owing to the great cutting that took place on account of the immense demand, especially from America, there is at the present time a great scarcity of the wood in our markets; another reason is that the transport is extremely difficult, as in the interior of Persia very often there are not any roads, and the cost of making them renders it too expensive. Of late years, being unable to get the burrs out whole, they have taken to cutting them into pieces about six to nine inches thick, termed "platiers." The original cost of the walnut burr is usually very small, from perhaps 10 shillings to a few pounds, so it is solely the heavy expense of transport that makes this wood so very dear. At the present time a very fine lot of burrs in the solid is worth at least £250 per ton here, and would be snapped up at once. Some four years ago a quantity of this wood was cut in Cashmere by a Frenchman who had travelled through Persia buying carpets, etc., for a large Paris house; the weight of the parcel was about 25 tons, and was sold for a considerable sum, but on account of the long time it took to transport this wood, the sun had very nearly cracked it through, as it had only been cut in thickness of about eight inches, so under these circumstances the venture did not turn out very successful. The last year or so fine wood has got scarcer and what pianoforte manufacturers would have had to pay for good figured veneers, one can hardly say, but fortunately for them, black veneers came into vogue. This veneer has had an immense run, and has been sold to the confiding public as ebonized, but in reality it was mostly the refuse sap of walnut and other woods (sold usually as guaranteed pear tree) which underwent a process of dyeing. It is most trying and injurious to the health of workmen, engaged in the making up of this wood, and it is a well known fact in the trade that even when finished it is unsatisfactory, no matter what pains are taken in the finishing and polishing, it very soon loses all its brilliancy, and in a short space of time looks dirty and dull. The price of this once fashionable wood is about 10s. per 100 feet, a slight difference good walnut that costs 1s. 6d. to 2s. 6d. per foot in the veneer.

The walnut burrs upon arriving either at Paris or London, are at once placed on a saw pit and squared, afterwards they are put in a large wooden house and steamed for about fifty hours; they are then fixed on a knife cutting machine—one of the latest improvements in which can be seen at Messrs. Esdaile & Co.'s city saw mills—and cut into veneers, the thickness of the sheet being about 40 to the inch. Knife-cutting machines were invented in Paris about 50 years ago, but did not cut with the same precision as at the present time, for it is now possible to get easily 150 sheets out of one inch thickness.

The route to the present burr cutting district is upon the road which Alexander Condie Stephens took on his return from Afghanistan, viz., London, Berlin, Dannaberg, Kharkoff, Rostooff, Vladik. as, Tiflis, and on to Baku, where search commences for the timber. An Armenian has just arrived (a Monsieur Krisdosdurian) in London with a parcel of burrs from these parts, and can be seen at the Rum Quay, West India Docks, where anyone having the curiosity to view the goods can do so, and it will be found well worth the pains of any one not knowing what these burrs are like to take the trouble of inspecting them. On following them to the mills one would be surprised to find such rough looking junks converted into figured leaves equalling in appearance probably the finest tortoise shell.—*Timber.*

THE CROSS-CUT SAW.

The following remarks on the cross-cut saw, our indispensable implement in the woods, are given in amusing form, but, nevertheless, they have the right ring about them. The writer says the cross cut saw is at the same time one of the most primitive and one of the most generally used implements. It is one of the advance couriers of civilization, and it remains a useful member of society despite its crudeness. It is its very simplicity that has caused it to be so tenacious of its position among needful implements. It requires no foundations, no motor, no special preparation. Where the axe leaves a tree, there the cross-cut takes it; and from the newly fallen log to the ship yard the cross cut is never hung up. Yet it is an aggravating, fatiguing, slow-working affair.

In the first place it requires great muscular exertion from the weakest muscles of the body. In the second, it not only developes one side of the body at the expense of the other, but by unnecessarily fatiguing one side of the body without giving it any reserve member, it lessens the capacity of the operator, already working at a disadvantage with weak muscles to do heavy work. In the third place, in most positions where the log lies upon the ground, the position of the sawyer is uncomfortable, unhealthy, and still lessens his capacity for work. The have, however, been many improvements made in the cross cut, as in other saws. The heavy bow frame strung into an arc has been abandoned. The curved edge of the blade has been brought from the top to the bottom or cutting edge, in order that as the saw wears away in the middle (as all saws do,) the wear of the blade may be taken up and still leave in a capable tool. The shape of the teeth also have been very carefully chosen to suit the varied requirements. Cross cutting has become a real cutting, and not a mere abrasion. The M tooth has been employed to give the best cutting edge with the best facility for sharpening. Perforations have been introduced along the line of the gullets to lessen the time, labor, and expense of filling, while it insures the teeth remaining at the proper distance and size. The gullets are made deeper at the centre than at the ends, for the same purpose that the cutting edge itself has been made convex. The handle has become a convenient affair, by which the tool may be firmly grasped and guided, and modifications have been introduced by which one man may do very heavy cross-cutting. But with all these improvements, the cross cut wears a man out, makes him lopsided, and brings into use only the muscles of his arms and shoulders. —*Journal of Progress.*

ACETIC ACID FROM WOOD.

It is well known that most of the acetic acid sold in the United States is produced by the distillation of wood, but some details of the operation may be new to our readers. Among other volatile products of this distillation are marsh gas, olefiant gas, and liquid at ordinary temperatures, benzole, toluol, phenol, etc. This distillation is usually carried on in iron ovens or retorts into which the wood is introduced.

In some cases the more volatile matters, such as water mechanically absorbed or contained as sap, are driven off by the application of a lower degree of heat, and in others this is not considered necessary. In some factories wood is treated both for its volatile products, such as acetic acid benzole and creosote, and for charcoal. In these the charge is ignited with free access of air until carbonized, which is predicated when the smoke given off becomes bluish instead of dark and heavy. The air supply is then shut off, and in place of a clean combustion the decomposition desired by the manufacturer is effected. The yield of acetic acid, as well as of liquid products, with the exception of benzole, in general, is less when the wood is rapidly charred.

In operating upon refuse wood, such as sawdust, spent dry stuff and tan bark, retorts of special form are necessary, as the application of heat is almost immediately followed by the formation of an exterior coating of hard carbon, which effectually protects the interior of the mass from the action of heat. This fact prevented, for a time, the utilization of such materials, but the difficulty was overcome by exposing only thin layers of material to the heating surface. The retort for this operation consists of a horizontal cylinder of iron, containing for its entire length a screw, which, while moving the materials steadily on by its evolutions, keeps it evenly distributed over the bottom of the retort. The cylindrical retort is so built as to expose the greater part of its length to the heat of a furnace, while at one end is a provision for feeding the material regularly. The other extremity has two branches, one running directly downwards terminates in a tank of water, into which the carbonized substances falls; the other leads to the condenser.

Where wood is operated in billets, simply cast or wrought iron ovens capable usually of holding about one half cord are used, and the vapors conducted to a suitable condenser. The amount of acid and charcoal obtainable from a given weight of wood varies with the kind of wood employed, but in general may be stated as something under 50 per cent. of charcoal. This acid is the crude product containing tarry and other empyreumatic products known in commerce as pyroligenous acid It is purified by subjecting to a slight heat, to separate benzole, and saturating the acetic acid with lime or soda. The salt is calcined in order to decompose the tarry matter present, and afterward distilled with a sulphuric or hydrochloric acid, which combines with the base and sets acetic acid free. This part of the manufacture is not always carried on by the distiller of wood, who must, from the nature of his crude material, operate near the source of his supply. Therefore, the acetate of lime is a commercial article from which the manufacturing chemist may produce the article in question. One advantage of this is that the solid acetate is more cheaply transported than the liquid acid.

THE *Timber Trades Journal* of August 8th says:—It is somewhat remarkable that notwithstanding the stagnation of trade, prices of Quebec pine have kept so steady, whilst the values of other descriptions on the Baltic side have experienced such fluctuations of an enfeebling character. We are glad, however, to note these latter are showing a firmer tendency now, which will probably get more established as the season advances, and when the lessened import has had time to operate.

AUSTRALIA.

The monthly circular of Messrs. Lord & Hughes, dated Melbourne, June 27th, says.—

Since our last circular on 30th ult. public sales have been fewer in number, but the offerings of nearly all descriptions have been ample for all requirements, as the trade are well stocked, and do not care to purchase largely during stock taking.

We have to report a slightly better feeling in Baltic deals and flooring and in Oregon timber, American lumber remaing at about the same price as at close of last month; but care has to be taken by importers not to press sales more than is required.

Trade from the yards continues fairly active, but a slight falling off in demand must be reported, as building operations at this, our mid winter season, are not as vigorous as they were.

RED DEALS.—Imports: Nil. Sales by auction have been cargoes ex New Zealand and Sumarlide, balance ex Govalia, and small lines ex G. P. Harbitz and Wm Le Lacheur; W crown R 9x4 realizing 6d., 9x3, 6d.; R R R 9x4, 4 15-16d., 11x3, 5¾d. to 6 5-16d., 9x3, 4 15-16d. to 4½d.; D D D 11x3, 5¾d. to 6d., 9x4, 4 13-16d. to 4¾d., 9x3, 4½d to 4d.

SPRUCE DEALS.—Imports: Nil. The cargo ex Obed Baxter was all sold by auction on 23rd inst., with exception of about 1,000 pieces 9x3; 11x3 realised 4¾d., 9x3, 3 5-16d. to 3d., 7x3, 3d. to 2¾d., 8x3, 3d. to 2 13-16d.

OREGON TIMBER.—Imports: 338,126 feet super. This parcel arrived per Nellie May, from Port Townsend, and has not yet been offered at auction. The cargoes, ex Malay and Magne, were disposed of at auction on 23rd inst., and that ex Cowlitz, on 2nd inst., at prices ranging from £6 2s. 6d. down to £5 10s.

LUMBER.—Imports: Clear pine, 194,431 feet super; white pine shelving, 173,274 feet super. These lines arrived per Great Admiral, from New York, and were submitted at auction on the 16th inst., white pine shelving realizing £10 to £12 5s.; dressed clear pine, £13 to £13 2s. 6d. The carpenter's clear pine and undressed ceiling and shelving were withdrawn for lack of competition.

PITCH PINE.—Imports: 10,406 feet super. This parcel arrived per Talisman, and was sold by auction on 23rd inst., at £5 12s. 6d. per 1,000 feet super.

REDWOOD.—Imports: Nil.

FLOORING AND WEATHERBOARDS.—Imports: 1,742,400 feet lineal. The arrivals have been—Salamis, from London; Skelmorlie, and Blairgowrie, from Glasgow. Sales by auction have been ex G. P. Harbitz, Skelmorlie, Magne, Loch Long, Java, Thor, Erato, and Augusta, at following prices:—Red, 6x1⅛, at 10s. 6d. to 10s. 3d.; 6x⅞, at 8s. 6d. to 8s. 3d.; 6x½, at 6s. 9d.; 6x⅜, at 7s.; 6x⅝, at 6s.; 4-out weatherboards, at 6s. White, 6x1⅛, at 9s. 6d.; 6x⅞, at 8s. 3d. to 8s. 9d.; 6x¾, at 6s. 9d. to 7s. 1d.; 6x⅝, at 6s. 9d. to 7s. 1d.; 6x½, at 6s. 9d. to 6s.; 6x⅜, at 6s. 6d.; 4 out weatherboards, at 6s. to 6s. 3d. By the foregoing it will be noticed 6x½ lining has advanced considerably in price.

KAURI PINE.—Imports: 200,000 feet super. The only arrival has been Malay, from Manukau. Sales by auction have been confined to flitches, ex Louise, at 11s., and various lines from wrecked cargo, ex Robin Hood. Logs are slow of sale, in consequence of large stocks now in hand.

CEDAR.—Imports: 168,300 feet super. Sales by auction have been of usual descriptions. Logs, ex steamers, at prices regulated according to size and quality.

DOORS.—Imports: 125.

LATHS AND PICKETS.—Imports: Lath, 852 bundles; pickets, 106 bundles. Laths are in plentiful supply.

SLATES.—Imports: 221,919 pieces. These arrived per Wallacetown and Westgate, from Liverpool, and Great Admiral from New York. The parcel of Blue Bangor American slates, ex latter vessel, was sold publicly on 16th inst., 20x10 realising £9 5s., 24x12, £13 10s.

PLASTER.—Imports: 500 barrels. There is no change to report in the market for plaster, and no sales privately have come under our notice.

CEMENT.—Imports: 7,065 barrels. The market for this description of building material has undergone no change since of last. Sales privately have been reported of Gostling's and Knight, Bovan & Co.'s., at 14s. 3d. to 14s. 6d.; outside brands, at 12s.

EXPLANATION.—Red deals and spruce deals are sold at per foot of 9x3; T. and G. flooring at per 100 feet running; Oregon timber, Redwood, clear pine, shelving, ceiling, per 1,000 ft. super; Kauri pine and cedar logs at per 100 ft. super; laths, pickets and slates at per 1,000 pieces. Shorts are all lengths under 12 ft.

A NEW INDUSTRY.

Theoretically, Nova Scotians are clever men; practically some of them are not. We have within this province resources, which, if properly developed, would greatly increase the wealth of our people. They are allowed to be idle, because our capitalists lack the practical knowledge which is required to ensure the success of a new enterprise. In the early days of gold mining in this province many of our moneyed men were bitten; to-day these mines, under the management of skilled men, are paying well. There is no country in the world better adapted for the manufacture of the sulphite wood fibre than in this province. We have the requisite minerals in abundance, with an almost inexhaustible supply of the wood required, and these with cheap fuel should enable us to successfully complete with the world in this new and growing industry. Our lumbermen are year by year forced to go further back from the lakes and water courses to obtain suitable timber, thus enhancing the cost of production to no inconsiderable extent; but they are leaving behind them the small and younger growth of timber which is admirably adopted for making wood fibre, and as the land is capable of producing a new growth within twelve or fifteen years, the supply of raw material should be unlimited. We have it on good authority that the average annual yield from our forests is about 125 million feet, board measure, which if sold at a profit of $2.00 per thousand feet, would realize $250,000 to the manufacturers. If an equalamount of wood were manufactured into wood fibre, it would produce 90,000 tons, which would net after paying all expenses $20 per ton, total profits being $1,800,000. The wood fibre when manufactured would probably sell at $60 per ton, which upon the above quality would be $5,400,000 which would be distributed among our lumbermen, miners, quarry men, farmers, millers, ship and real estate owners. The lime stone and pyrites required in the manufacture of wood fibre are found in large deposits in this province, and as there is no fear of glutting the market, the industry is one which could not fail to prove remunerative. There are in Norway 50 pulp mills which produced in 1884, 160,000 tons of pulp. In Germany, Austria, and Switzerland, there are 60 ground wood pulp mills and 80 chemical fibre works, of which latter 60 are producing sulphite fibre. Despite this enormous production the price of pulp and fibre has not fallen materially, notwithstanding the depression of the last few years. The sulphite wood fibre can be produced at one third of the cost of esparto and straw pulps, which are very largely used, and the rapidity with which sulphite wood fibre has been adopted for all grades of paper up to the finest, proves that must fill "a long felt want," and fill it well. England and France consume yearly 315,000 tons of esparto pulp. Wood makes a better pulp, and will in time replace that material. It will thus be seen that we have in this province natural products, which if properly combined and skillfully manufactured would produce a remarkable product, and that 90 per per cent, of the receipts from its sale would find its way into the pockets of our own people. We have the capital and the material required for this industry, but we lack men possessing sufficient practical knowledge to ensure its success. Why do not some of our young Nova Scotians visit the German or Norwegian mills, which would fit them to engage in this enterprise. One year's experience in a large mill would be sufficient to enable them to acquire a thorough knowledge of the business, and this knowledge might prove advantageous both to themselves and to the country at large.—*Halifax Critic.*

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Aug. 1st 1884 and 1885, and also the Consumption for the month of July 1884 and 1885:—

	Stock, Aug. 1st. 1884.	Stock, Aug. 1st. 1885.	Consumption for the month of July 1884.	Consumption for the month of July 1885.
Quebec Square Pine	410,000 ft.	326,000 ft.	305,000 ft.	96,000 ft.
" Waney Board	380,000 "	311,000 "		
St. John Pine	22,000 "	33,000 "	00,000 "	25,000 "
Other Ports Pine	63,000 "	44,000 "	29,000 "	0,000 "
Red Pine	69,000 "	29,000 "	3,000 "	0,000 "
Pitch Pine, hown	661,000 "	680,000 "	347,000 "	116,000 "
" Sawn	479,000 "	514,000 "	127,000 "	78,000 "
Planks	64,000 "	70,000 "	41,000 "	32,000 "
Dantzic, &c., Fir	69,000 "	63,000 "	17,000 "	0,000 "
Sweden and Norway Fir	67,000 "	40,000 "	00,000 "	0,000 "
Oak, Canadian and American	290,000 "	245,000 "	78,000 "	43,000 "
" Planks	265,000 "	189,000 "	129,000 "	40,000 "
" Baltic	12,000 "	6,000 "	0,000 "	5,000 "
Elm	38,000 "	30,000 "	31,000 "	10,000 "
Ash	29,000 "	23,000 "	8,000 "	0,000 "
Birch	63,000 "	68,000 "	61,000 "	76,000 "
East India Teak	29,000 "	89,000 "	12,000 "	3,000 "
Greenheart	37,000 "	65,000 "	18,000 "	3,000 "
N. B. & N. S. Spruce Deals	21,578 stds.	11,022 stds.	} 13,070 stds.	8,473 stds
" Pine	1,200 "	157 "		
Quebec Pine & Spruce Deals	8,123 "	4,196 "	3,140 "	2,983 "
Baltic Red Deals, &c.	3,273 "	2,615 "	491 "	505 "
Baltic Boards	20 "	68 "	20 "	10 "
" prepared Flooring	3,386 "	2,767 "	000 "	978 "

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of July 1885, and also for the 7 months ending July, 1885:

MONTH ENDED 31ST JULY 1885.

	Quantity. Loads.	Value. £.
Timber (Hewn).		
Russia	43,298	73,705
Sweden and Norway	57,510	83,082
Germany	40,300	79,940
United States	14,955	50,233
British India	4,260	51,218
British North America	41,768	186,012
Other Countries	34,820	48,184
Total	236,920	573,304
Timber (Sawn or Split, Planed or Dressed).		
Russia	191,872	407,233
Sweden and Norway	280,650	575,216
British North America	157,090	382,262
Other Countries	29,042	78,388
Total	658,860	1,443,099
Staves, (all sizes)	15,775	58,621
Mahogany (tons)	3,196	31,905
Total of Hewn and Sawn	895,780	2,016,403

SEVEN MONTHS ENDED JULY 31ST 1885.

Timber (Hewn).		
Russia	115,896	216,650
Sweden and Norway	311,717	433,133
Germany	186,667	435,126
United States	16[illegible],205	339,440
British India	23,082	313,072
British North America	51,432	219,934
Other Countries	238,328	331,405
Total	1,0[illegible]3,847	2,[illegible],760
Timber (Sawn or Split, Planed or Dressed).		
Russia	443,104	918,237
Sweden and Norway	898,970	1,837,68[illegible]
British North America	255,814	624,236
Other Countries	214,223	635,571
Total	1,812,211	4,065,932
Staves (all sizes)	61,892	272,014
Mahogany (tons)	35,138	311,971
Total of Hewn and Sawn	2,841,688	6,353,692

LAKE WINNIPEG TIMBER.

Mr. J. S. Mundy, a leading lumber manufacturer of Williamsport, Pa., and pine land and mill owner in Wisconsin, was a recent caller at the office of the *Lumberman*. In June, 1884, he was in Manitoba, and made an exploration of the Lake Winnipeg region, with the object of gaining some knowledge of its timber resources.

Mr. Mundy had a peculiar experience with the climate of Manitoba to start with. When he left Williamsport with the object of penetrating far down towards Hudson's Bay, he thought that since he was to dare the land of perpetual ice and snow, he would take along an ample outfit of winter underclothing. Accordingly his baggage bulged with such bodily comforts as thick flannels and woolen hosiery. At Winnipeg he was surprised to find, that instead of a rigorous air and frost every night, the locality was actually sweltering under a scorching sun that would do credit to Khartoum, with the difference in favor of Winnipeg that there the orb of day hung like a ball of fire over the landscape for 18 or 20 hours out of the 23, while at Khartoum the sun rises and sets with decent seasonableness. For four days while Mr. Mundy was at Winnipeg—and it was only June, remember the mercury stood in the vicinity of 100 degrees, and there was scarcely a breath of wind to relieve the intense heat. Our traveller thought of the cool breezes of the South, and longed to get away from the torrid north.

He saw two men digging a trench under a sidewalk, probably for gas or water pipes. They had pick axes, and were actually hacking up the frosty earth as if it were soft rock. He asked them how deep the frost was at that spot, and they replied that it was probably nine feet. "How can you ever raise a crop in this country, with the frost as deep as that?" asked the tenderfoot. "O, that is easy enough," replied the Winnipegers. "You see, when the spring opens and the snow is gone, our summer comes in a hurry, and begins business just as you feel it to day. In four or five days after the snow is off, the harrows are put to work and seed is immediately sown. The grain comes up quickly under the warm sun, and the growth soon covers the ground. Afterwards there is but little rain, but plenty of sun, which continues to melt the frost underneath the grain roots. The moisture thus freed nourishes the plant and it grows apace. Thus a short season of favorable conditions matures the grain in fine condition"

Mr. Mundy chartered a tug, and ran north on Lake Winnipeg to Fisher river, 120 miles. As he was about to start on his voyage of discovery, from Selkirk, at the head of the lake, he found a missionary, who had paddled in, all the way from Fisher river, in a canoe. Mr. Mundy offered this missionary a passage back on the tug, with his feed to boot, which was accepted as a special providence, the canoe being towed behind the tug. He proved to be a man of keen intelligence, and possessed of wide and accurate knowledge about the region to be visited. For many years this missionary had lived, travelled and labored as a moral teacher among the Indians, covering hundreds of miles in his journeyings, which were mostly made in his trusty birchen craft. He had explored vast districts at the lower end of the lake, probably never before trod by foot of white man.

Mr. Mundy was grievously disappointed when he got out upon the great lake. Instead of a bracing breeze, dancing waves, and a cooling temperature, he was disgusted to find a continuance of the same dead calm that was experienced on the land, while the sun blazed on through the days that seemed to never end. To make the voyage more disagreeable, whenever the tug ran near the shore a swarm of black flies, each apparently as big as a hazlenut, sweep aboard the craft, evidently intent on making a meal of the crew at one fell swoop. When the black flies got tired vast herds of immense mosquitoes came abroad to clean up the fragments of the repast. All the way to Fisher river and back, 240 miles, there was the same dead calm, scorching sun, black flies and mosquitoes, and endless days.

But Mr. Mundy went to Fisher river, and in that neighborhood saw a large area of excellent spruce timber that is to become the future supply for the mills of Manitoba. The spruce is not large, but it is smooth and straight, and

sound as a nut, the knots being small, red, and tight as a cork in a bottle. He thinks that in the process of time this spruce will become a valuable resource in the lumber supply of Manitoba and the Northwest Territories. There is nothing to hinder the safe and easy rafting of logs from any point on the lake to Selkirk or Winnipeg, or any other point where mills may be erected, because of the remarkable absence of winds and rough seas, such as make rafting on the great lakes so hazardous.

So far as Mr. Mundy's observation extended, the shores of Lake Winnipeg are mostly low and marshy, and covered with a thick growth of tamarac and poplar. The region will be a paradise for the wood pulp men whenever the Canadian Northwest has 12,000,000 inhabitants, and wood pulp becomes an object of local demand. Little good spruce is to be seen on the east shore of the lake until the Fisher river region was reached, and there is little or no pine anywhere in that country.—*Northwestern Lumberman.*

WATER-WHEEL STEPS.

In reply to "Subscriber," query 47, the question, what is the best material for steps, is one that cannot be perfectly answered on account of the large variety of wheels with steps so different in size, compared with the weight and revolutions of the various wheels. The material put into one wheel might prove or seem to be the best, while the same put in another would prove to be bad.

There are various kinds of wood used, such as maple, oak, hickory, lignum vitæ, and others, quite plentifully, but which is the best is yet to be found out. Unless these woods are all tried under the same wheel and with the water in the same condition, there will be no telling which is the best. If the inquirer has trouble in this line he will do well to state the size of the wheel, the fall of water and the number of revolutions of wheel per minute, as well as the diameter of steps; then I think that he will be on the way out of his trouble, that is, if he is troubled with his wheel steps; and the nature of his wheel or wheels must also be known. If all the foregoing data were given, almost any good millwright would be able to inform the inquirer about the size of the steps to use under the wheels.

If the right size of step is applied to the stress put on the step, any of the above varieties of timber mentioned will prove good. In my long experience in the line of wheel steps, the trouble was not so much in the kind of wood used as in the form of the step and its side compared with the stress upon it. Having used all kinds of wood for this purpose, I find the second growth of rock maple to be the best, although others might find it only second best. —*J. W. Truax in American Miller.*

DEATH OF MR. JAMES BENEDICT.

Many of our readers will regret to learn of the death of Mr. James Benedict, of the firm of James Benedict & Son, which occurred last Saturday at his residence in Albany, N. Y., at the advanced age of eighty years and four months. This event reminds us that the pioneer lumbermen of the country are fast passing away. The firm of James Benedict & Son is well known to the lumber trade of Canada and the United States. It has done business in Canada with nearly all the lumbermen of the Bay of Quinte district and other sections of Ontario, including among other well known names in the trade, Mr. Sanford Baker, who for many years owned Baker's Island Mills, Mr. Stinson (deceased), Mr. F. Walbridge, Rev. Henry Usborne, who built and operated the mills now owened by Gillis Bros. at Braeside, Messrs. Thompson and Miller of Longford, the late J. C. Miller, of Parry Sound, H. McLachlan, of Arnprior, the late W. A. Scott of Peterborough, &c. The firm commenced doing business with H.B. Rathbun, Esq., in 1856 and the business relations then established have continued uninterrupted for 29 years. The closest commercial intercourse had endeared the deceased gentleman to many connected with the business founded by Mr. Rathbun, and from all of whom he had succeeded in winning the greatest respect and confidence.

Mr. Benedict, who was of English parentage, was born at Danbury, Conn., and had for the past thirty-one years resided in Albany. He commenced his lumbering operations in a mill which he himself erected on a small stream on his father's farm. He afterwards transferred his operations to Ulster Co., N. Y., where for some 13 years he handled the bulk of the lumber manufactured in that country. In 1854 he went to Albany where he established the house of J. Benedict & Son, which for 3 years has been so singnally prosperous. In 1856 he was also largely engaged in the tannery business in Sullivan Co., N. Y., erecting what at that time was considered the model tannery of the State. Mr. Benedict was the first lumberman to introduce the delivery of hemlock building timber to the retail lumber yards of New York city. Spruce and pine had before that been exclusively used. He supplied a large amount of timber used in the first construction of the Hudson River Railway and the old New York and Erie Railway. He also furnished the timber used in the construction of the dams on the Croton River which supplies the city of New York with water, and the timber used in the construction of the old water reservoirs of the same city.

Mr. Bendict was an excellent business man, being endowed with great energy and sterling integrity. His business operations were large and conducted on the most conservative principles. For many years previous to his death his failing health compelled him to relinquish his active business pursuits and live a life of comparative retirement. He was a member of the Baptist church, but generous in his aid to to churches of all denominations and ever modest and unassuming in his good works as in all his business operations.

At a meeting of the Board of Lumber Dealers, of Albany held at the District Chapel, on August 17th, 1885, the following memorial was unanimously adopted:

Again are we called together to take proper action in reference to the death of one of our oldest and most prominent members, Mr James Bendict, the senior partner of J. Bendict & Son, a firm which has been recognized as the larges dealers in the district, and one of the charter members of our organization. His long business experience, his commercial capacity, his uncompromizing honesty, and his matured judgment, have made him prominent in our board, and we would do well if all would emulate his virtues and be prepared, as he was, for the great change which, sooner or later, awaits us.

On motion, the board resolved to attend his funeral as an organization, and that this memorial be published in the daily papers, and that a copy be transmitted to the family of the deceased.

WM. N. FASSET, Secretary. HENRY PATTON, *Vice President.*

On the occasion of his funeral the lumbermen of the city of Albany closed their offices out of respect to his memory. His remains were interred in a beautiful plot which he had purchased in the Rural Cemetery of Albany. He leaves a wife and one son, Ezra G. Benedict, who is also widely known in lumber manufacturing circles.—*Decrorto Tribune.*

THE VICTORY OF THE S. A. WOODS MACHINE CO. AT THE NEW ORLEANS EXPOSITION.

It is generally acknowledged by persons connected with wood working business, who had the pleasure of visiting the New Orleans exposition, that what was called the wood working machinery annex contained the most varied and complete display of wood working machinery ever seen on the continent; and as the United States is far ahead of any other countries in the manufacture of this particular class of machinery it may be confidently stated that the exposition exhibit of wood working machines was the greatest the world has ever seen.

As almost all the prominent manufacturers of wood working machinery in the United States had their machines entered for competition, the keenest anxiety was felt as to its results, and no trouble or expense was spared by the competitors to make as good a display of their machinery as possible, not only from its advantage as an advertisement to the wood workers who visited the exposition from all parts of the country, but from the much more important advantage which would result from the securing of an award over so many well known competitors.

There was also, at the opening of the exposition, a struggle to secure the most desirable positions for a favorable display, and in this respect the concern which was most disadvantageously located was the S. A. Woods Machine Co. A public street, which the exposition management found it impossible to close, passed directly through the machinery annex and cut off a large amount of space which would otherwise have formed a part of the S. A. Woods Machine Co.'s exhibit. This was a very discouraging state of affairs, but the company, although occupying such an unfortunate position for the display of their machines, made the best of their situation, and by cutting out a partition which seperated their exhibit from the main exposition building, and by a good arrangement of their machines, overcame to a certain extent the disadvantages of their position, which were so great that at one time the company seriously contemplated retiring their exhibit altogether from the exposition. Their confidence in the excellence of their machines convinced them, however, that with any sort of a fair showing before an intelligent committee of judges they were bound to win; and the sequel proved that this confidence was well founded, as before an examining committee composed of some of the most intelligent machinery experts to be found in this country, and after a thorough examination and comparison with other machines of like nature, they obtained the highest award which could be secured—namely, a gold medal for superior excellence for each different machine exhibited by them. Eight different machines were exhibited for competition by the S. A. Woods Machine Co., Boston, New York and Chicago, viz., Fast Feed Flooring Machine, Moulding Machine, Double Endless Surfacer, Jointing Machine, Circular Saw Machine, Planing machine for matching two boards at a time, Panel Planer, and Shop Surfacer, and eight gold medals of the first-class for superior excellence were received by them over all competitors, thus placing their machines, on a fair verdict from a committee of experts, at the head of the wood-working machinery manufacture of the world.

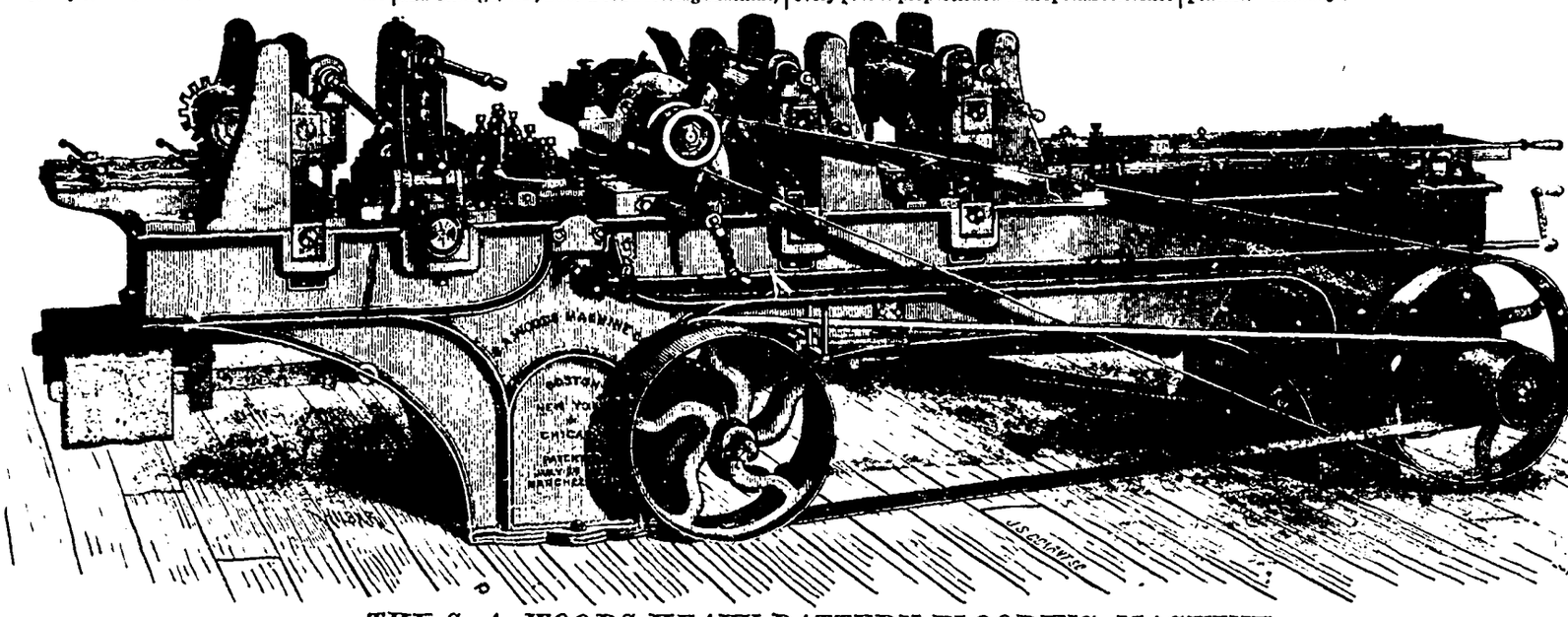
This award is well deserved, for there is no concern in the country which pays closer attention to the manufacture of its machines, or maintains a position nearer to the front in the matter of improvements. The verdict of the judges of award at the New Orleans exposition is one which had already been made by the most intelligent wood working firms in the United States and other countries, as evidenced by the large orders for their machines which the S. A. Woods Machine Co. have received during the exposition and since its close.

One of the most important and widely used machines in the exhibit referred to above, is the new heavy pattern flooring machine, an illustration of which we present with this article. This machine has been designed by the S. A. Woods Machine Co. with special reference to high speed and fast feed, to meet the requirements of mills doing a large amount of business, and at the same time producing the very best work. It embodies many new features, and every part is proportioned with special reference to convenience and durability. One of the special features of this machine is the feed rolls, which are heavily weighted and provided with expansion gears, and are so mounted with expansion gears upon both ends of the shafts that an equal pressure is obtained upon both edges of the board, causing it always to "hug the guide" and feed through straight.

The method of suspending and weighting the feed rolls is entirely new, and the machine possesses many valuable and novel features which cannot fail to make it popular with practical wood workers.

Leather Belt Cement.

An ordinary cement for this purpose is wheat flour boiled in oil of turpentine, but the ends must be secured by rivets, or it is not reliable. A better cement is made by soaking six ounces best glue in one pint of ale, then boil, add one and a half ounces of boiled linseed oil and stir well. Another prescription is to take dissolved glue in the same as the cabinetmakers use it, and add tannic acid till creamy and ropy. Make the leather surfaces to be united rough, apply the cement hot, let it cool and dry under pressure, and it will not need riveting. For rubber belting take pure rubber in thin slices, two ounces, dissolve in one pound of bisulphide of carbon. This is a good cement, but if kept thickens very soon. In order to prevent this add a solution of pure rubber, resin and turpentine.—*Exchange.*



THE S. A. WOODS HEAVY PATTERN FLOORING MACHINE.

GRINDING WOOD.

Out among the Adirondacks the soft woods of that region are being ground into a fine pulp flour for mechanical purposes, which can not only be used in a manufacture of paper, card-board and oil-cloth, but can be thrown in with the feed of horses and other animals, that make a meal of almost any thing that is tasteless, provided it is sweetened up with a little nutritious matter. How far the fibre of the fine grains of spruce has found its way into the eatables of the human family remains only for the chemist to decide. For the purpose of soft wood flour, however, the trees are cut down and trimmed of their branches, and the bark removed by a gang of workmen who are familiar with the use of the draw knives, when the trees are ready to feed endwise through a hollow auger that is turning about as rapidly as a buzz saw. This hollow paring machine contains a number of knives that plane off in its circular path the fine shavings for the grinding machine similar to that of a lead pencil sharpener in bringing a conical point on a pencil. This operation reduces the fibres of the tree into lengths no longer than the thickness of a shaving, and soon reduces a log of wood into miles of ribbon that can easily be broken into flour by the millstones, as the grain of the wood runs nearly crosswise. This process differs in many respects from that employed in reducing wood to pulp to be filtered into paper. The cutting of the knives would be injurious to the minute fibres as some of them would be severed in the operation. In the mountainous districts noted for their water power, where wood can be ground on large revolving stones without the aid of steam in any form, and where the cost of power is not limited, the timber is cut up in lengths of about four feet and rafted down the streams to the mills, where it is taken into a side channel and raised out of the water by an endless chain that carries each length of wood into the storehouse, and piled up for use. They are then taken to a large circular saw and cut up into four pieces crosswise that leaves the bolts one foot in length. The bark is then planed off very rapidly on a revolving side cutter, the long knives on the face of a large wheel pares of the bark lengthwise of the bolt while it is being slowly turned about on a table by the workmen, when they are ready for the splitting machine. This machine is nothing more than a blunt wedge which is driven up and down by a crank motion. The bolts are placed beneath this stamping wedge that cracks them in halves in an instant, and the knots split out, if any are to be found, and the bolt reduced into pieces sufficient for the grinding machine. This is the machine that requires so much power to keep the mill in motion. The pieces of wood are laid crosswise of the stone and act as a break to keep the grinder from turning. The stone is kept well saturated with water, and its rough surface scrapes and grinds the fibres crosswise with the grain and mashes them into a pulp for the paper mill. The blocks of wood are placed in a rectangular box, so arranged that the grinding surface forms the bottom of it. The cover or follower is forced down by a feed screw, having a friction nut to guard against an over pressure on the stone. With five or six of these grinding pits arranged in the circumference of the revolving stone a large amount of power is absorbed in converting wood into pulp. The pulp being mixed with water in grinding is easily conducted in pipes down the stream to the next water privilege, where it meets with a chemical process, consisting of baths in superheated steam and alkali, under high pressure, in boilers that free the cellulose tissues of the pulp of all the impurities that find their way into the mass as well as into the lumber when the trees were grown. From this process, with the assistance of a few white rags, it is made available for the finest book and writing paper. In the paper industries of the world there is already to be found as much wood pulp in use as that from rag, and the uses of the former is very rapidly developing.—*Exchange.*

WOOD STAINS IN A DRY FORM

Andes (Erfindungen und Erfahrungen) gives the following formulæ for some wood stains, which may be put up in a dry form, and when wanted for use may be readily dissolved in water:—

OAK WOOD.—Five kilos. of Cassel brown, 0.5 kilo. of potash, and 10 kilos. of rain water, boiled together for an hour, the whole strained through a linen cloth, and the clear, dark-colored liquid boiled to a syrupy consistency.

WALNUT WOOD.—A decoction of Cassel brown, 3 kilos.; potash, 0.5 kilo.; and water, 7 kilos.; the whole strained through linen, and during evaporation to syrup, 2.5 kilos. of extract of logwood added.

MAHOGANY.—A decoction of extract of Brazil wood, 3 kilos.; potash, 0.25 kilo.; and water, 3 kilos.; to which, before evaporating to syrup, 150 grs. of cosine are added.

EBONY.—Five kilos. of extract of logwood boiled with 11 kilos. of water, and when near the syrupy state, 300 grs. of iron nitrate added; evaporated to syrup under constant stirring.

All the above stains are brought into a dry condition by running the respective syrups into trays of sheet iron, with low rims, in which the syrup hardens, and is afterwards broken up and ground.—*Exchange.*

THE PIONEER IN WOOD PULP PAPER.

Paper made partly of wood pulp was first manufactured and sold in this country by the Smith Paper Company, of Lee, Mass. In 1883, Alberta Pagenstecher, who owned the patent of the Voelter grinder, and who had in vain endeavored to pursuade paper manufacturers to use it, came to Stockbridge, adjoining Lee, on a visit, and finding a small available water power, he made a contract with this paper company to take his pulp at eight cents a pound. The pulp was used and the paper marketed at twelve cents a pound, the usual price at that time for printing paper. After some time the water turned out to be too small and Mr. Pagenstecher sold his pulp mill; soon after he sold to Congressman William A. Russell, of Lawrence, Mass., the right to use and sell the grinder in New England, and to Senator Warner Miller, of Herkimer, N. Y., the right for New York State. The commercial success of wood pulp is due to the efforts of these gentlemen, after the Smith Paper Company had demonstrated that paper made partly of this pulp was undistinguishable from cotton paper and was just as saleable, if the purchaser at that early day was not told what his paper was made of. The Smith Paper Company has the credit of being the very pioneer in the manufacture of this paper, which has fallen in 20 years from 12 cents to five and six cents a pound, principally because the wood pulp has fallen to one and a half to two cents. It may be noted, also, that the Hon. Elizur Smith, the senior member and the founder of this company in 1865, when in company with Geo. W. Palmer in 1854, made all-wood pulp from basswood. They experimented at the instance of a Frenchman named Melier, who came to Lee to persuade them to do so, and the paper that they made is believed to have been the first all-wood paper ever made in the United States. Samples of it are now preserved in the office of the Smith Paper Company, not well bleached and showing brown fibres, but otherwise much like the all-wood paper recently made and to be made at Glens Falls, N. Y.—*Paper World.*

PROSPECTS OF RAILROAD CONSTRUCTION.

The *Railway Review* remarks as follows:—"The talk of a revival in railway construction has not as much foundation in fact, as rail makers and railroad builders earnestly desire. Still the limit of extreme depression has almost been reached. An enormous volume of capital is only awaiting the word 'go.' No doubt it will be spoken, in time, but when, no one knows. So far the construction of this year is under 900 miles. But meanwhile railroad building on paper is being pushed with but little sign of flagging enterprise. Within a few days the announcements of new roads represent a mileage of 1,800 miles. The confidence of capital is still wanted, but when this is secured railroad construction will return to something like former activity, despite the warnings of the thoughtful ones who are telling the people that we are far ahead of requirements and must wait. Railroad building is a favorite pastime with a great many Americans, and they will not be deprived of their pleasures. They have become accustomed to ups and downs, bankruptcies and receiverships, and to long seasons of no dividends, and are willing to take all these risks again. This element is indisposed to accept the restraint of conservative counsels, and may be counted on to improve to the utmost any suspicious hanges in financial circles."

MILL BUILDING IN THE SOUTH.

While, within the past year, but few mills have gone up in the Northwest, mill building in the South generally has been active. Several large corporations have started into existence. Timber lands have been bought very cheap, which, no doubt, is the main excuse of more progress in this direction in the south than in the Northwest. Yellow pine lumber, except for local use, has been rather slow of sale; but that has not seemed to put a damper on mil building. We are inclined to consider unfavorably the erection of so many mills. The demand for yellow pine has been on the increase since its introduction in to the northern markets; but the point has been by no means reached where the product of the mills is readily taken. It is not wise in any line of manufacture to increase the supply much beyond what the demand will warrant. The minute is so increased there are sure to be depressed prices. That is the trouble with the white pine manufacturers at present. Ready sales and profitable prices, a few years ago, stimulated the building of mills, and every man who could control a tract of pine thought the erection of a mill the proper thing to do. But, as is now seen, it was overdone. The future demand for lumber, promising as it was, was discontinued. Some of the owners of white pine mills would not now object to there going to ashes, provided they were insured. There is altogether too much lumber on stick. It costs a good deal of money to carry it, and the influence it exerts is bad. Comparatively clean docks and yards act as a tonic on both the retail dealer and consumer. The Southern manufacturers, it seems to us would act wisely if they studied these condition. The call for yellow pine lumber will become louder—it cannot help it—but it should be remembered that the territory in the south capable of producing lumber is a big one. There is no particular glory in running a saw mill; it should be run for the money there is in it, if at all, and an unlimited number of mills are not productive of satisfactory profits.—*Record of Lumber Mills and Lumber Dealers.*

DEFENDING ALASKA.

The newly appointed governor of Alaska, Mr. A. P. Swineford, of the Marquette, Mich., *Mining Journal*, is noted as a joker and for getting back to the home stake every time in a repartee. Secretary Hotchkiss of the Lumberman's Exchange having to write Swineford recently on business matters, took occasion to commiserate him on his forthcoming residence among the icebergs and grizzlies of Alaska, advised him to get his life well insured for the benefit of mankind in general, and hoped a kind providence would protect him from the Indians, and especially the Russian bear, and permit his going on pleasure "exertions" to Siberia or the North pole, etc., etc. Swineford's reply is characteristic: "Thanks for your sympathy I go where I will have cool breezes and a temperature of not more than 75 degrees in summer, and an average of 38 degrees above zero in the winter! Go buy you a geography or cyclopedia and then let me hear from you again! If after you see a piece of red or yellow Alaska cedar, cut from trees ranging in diameter from three to nine feet, you want to keep on handling scrub pine from Wisconsin and Michigan, just keep at it and you will have the sympathy of, yours truly, A. P. S."—*Northwestern Lumberman.*

LEITH.

The *Timber Trades Journal* of August 1st says:—There has been a fair average importation of wood goods from the Baltic this week, also a cargo of oak from Bayonne, and whilst writing another of the Quebec vessels is exciting general remark, and some of them, if much longer in arriving, will be unable to make this season their customary two voyages.

As regards the trade this week has been almost a blank, owing to the holidays, but it is hoped that now they are passed business will resume its usual course.

The public sale this week has been postponed until Thursday, to allow of the holidays being fairly over, so that a report of same will not appear until next week.

STATELY ROOM.

This magnificent apartment is probably unrivalled in the beauty of its oaken panels and carving. The noble and massive effect is increased by its exceeding loftiness. It fills two storeys of the north front and is lighted by two tiers of three windows each, and by two oriels at the upper end of the north side. The room is fifty feet long by thirty feet wide. An oaken wainscot, which runs around two sides, rises as high as the top of the chimneypiece. The wainscot is plainly panelled, and is without ornament of any kind. This simple yet bold and free treatment of the wood is incomparably effective. Warm, rich, and massive, the dusky oak most exquisitively reflects the ever varying shades of light. On the southern side of the room the wall space between the wainscot and the ceiling is filled up by some clear and delicate Gobelins, with deep effective borders. But it is to its carved oak screen and its two galleries that the Marble Hall owes most of its fame. The screen is at the western end, and partitions the room from the lobby outside. It is divided by richly carved pilasters into compartments filled slightly enriched panel surmounted by an open work fan ornament. The large folding doors, with the bold and sweeping arch, are identically treated. Above the screen, and projecting slightly from it, runs the Visitors' Gallery. The front presents a wealth of carving, modelled on the same lines as the screen, but richer and more fantastic. The plain shields of the two compartments beneath the apertures, for visitors to watch the diners below, are foils to the delicate arabesques and the fanciful tracery of the divisions which flank them. An enlargement of the fan ornament of the screen, surmounted by a bold and massive cornice, completes this delightful piece of woodwork. At the opposite or eastern end of the hall is a Minstrels' Gallery, which, having twelve open compartments, hardly presents so good an opportunity for the art of the decorator. Nevertheless it is richly pannelled, and the panels are filled with delicate arabesques. Here are introduced the heraldic lions of the Cecells, bearing cartouche-shaped shields containing the emblazoned arms of the marquessate.—*Magazine of Art.*

A Terrible Accident

STRATFORD, Aug. 18.—A young man named George Moses, of the township of Downie, was hitching the horses to a wagon, when his father came out of the barn with a barrel on his head, at which the horses took fright. As they started to run the pole of the wagon caught the son's nose, tearing it off and half of his face. There are little hopes of his recovery.

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

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PETERBOROUGH, Ont., SEPT. 1, 1885.

THE tamarac forests in several counties of New Brunswick are suffering from the ravages of caterpillars.

DRAKE, Burrows & Rutherford, saw millers and lumber dealers, at Selkirk, have dissolved partnership.

THE lumber trade of Selkirk, Manitoba, is reported good. Long trains are taken away from that point daily.

THREE barges were recently at Grand Marais, upper Michigan peninsula, loading board pine for Quebec, shipped by Tim Nester.

THE large mill of Cross & Dyer, of Standish, cut 133,000 feet of lumber and timber with one exception this is the best record in Michigan.

THE largest dry dock in the world is said to be at St. John, Newfoundland. It is 600 feet long at the top, 558 feet long on the keel line and 132 feet wide.

THE Chicago Lumbering Company, at Manistique, Mich., is running its mills night and day, and will turn out this year 65,000,000 feet of lumber. No curtailment there.

CAPT. B. WAIT, of Grand Rapids, reports to the Muskegon *News* that he has sold 1,940 acres of pine land in Delta and Schoolcraft counties to the Delta Lumber Company at $10 per acre.

LARGE numbers of men are already leaving for the woods, several lumber firms having sent men up during the last few days. Booth & Gordon will send a large gang to their Kippewa limits on Monday next.

THE firm of Houseman, Wager & Townsend, of Grand Rapids, have sold to Simon J. Murphy, of Detroit, a tract of 3,000,000 acres of pine and hardwood timber land located in Wisconsin, on the south shore of Lake Superior. The consideration was $65,000 spot cash.

UP to a recent date St. John, N. B., had shipped 35,000,000 feet of deals to European ports this season, Parrsboro had shipped 20,000,000 feet, 40 large vessels and as many small ones having taken cargoes from that port.

THE Ottawa *Free Press* of Aug. 22nd says:—The manufacture of square timber is going to be more extensive this coming season than it has been for a number of years, owing to the advanced price recently realized for that description of lumber

ON Thursday forenoon David Jowell, aged 17 years, third son of Mr. David Jowell of Midland, had his left thigh bone broken by a piece of slab thrown from the bolting saw in the red mill where he is employed. Dr. A. Wilson was sent for, and with the assistance of his brother, who arrived a minute or two later, set and bandaged the limb, and the patient is doing well.

QU.—Have lumbermen owning timber limits in township a legal right to cut grass on beaver meadows situate on unlocated lots, and to exclude settlers from cutting grass on the same meadows? Have they the legal right to give settlers notice not to cut grass thereon? Ans.—If the facts are that the lumbermen are in possession of the beaver meadows, which are parts of unlocated lots for which the patents have not been issued, and are cutting the grass thereon, whether so far as the Crown is concerned such possession and cutting of grass is wrongful or not, we think that probably the lumbermen may prevent any interference by the settlers. If the lumbermen are not in possession we do not think they are entitled to prevent the settlers from also cutting grass on such unlocated lots. Probably both the lumbermen and the settlers may be considered trespassers so far as the Crown is concerned, but the lumbermen have have no better right than the settlers, unless acquired by possession. —*Mail.*

A LARGE CARGO.

To the Editor of the Canada Lumberman.

SIR,—Probably the largest cargo of sawed lumber that has ever been shipped from Canada left this port to-day, per steamship Regius, Capt. Kayll, on account of Bryant, Powis & Bryant, of London, England. It consisted of 1,272 St. Petersburg standard three inch deals, or 2,518,560 feet board measure, equal to ten large barge loads of 250,000 feet each. If it were in one inch boards it would cover a farm of sixty acres, and require the pine product of say 1,000 acres of ordinary forest land, such as we have to depend on for our future supply. This shipment may suggest to the minds of many the great importance of the future of our leading industry. There is no questioning the fact that our country is fast being depleted of one of its most important elements of prosperity, and that it behooves not only the lumbermen and the Government, who are directly interested, but almost every member of the community to do what they can by expression of opinion or otherwise to protect that that cannot be reproduced in our day.

Yours, &c.,
Montreal, Aug. 10th. J. K. WARD.

FORESTRY.

SIR,—Opinions differ, and it is well they should; it is conflicting waves of disagreement which prevent stagnation in the ocean of thought. But in my opinion, of all done in the way of legislation last session in all the many parliaments and governments of our country, the most beneficial was two measures—and they not very imposing or sweeping ones—in the forestry line, inaugurated by our Local Government here. The first was the facilities given for increase in number of the persons employed in watching and surpressing fires in the lumber districts, a most valuable movement, and one certain to save millions of dollars. The next is the appointment of an Arbor Day, under which arrangement a large number of trees were planted this spring, and it is likely many thousands will be every spring succeeding. What I should like to draw the attention of all planters to is the fact that a great number of trees, well enough planted, die yearly in Ontario from want of after care, or if they live grow so slowly as to disappoint the expectations of their planters and render the time spent in planting them and the years spent in expecting them to grow alike a loss. I have seen a plantation of maples (this was last year, in Oxford county) which had been planted fifty years since carelessly, and as carelessly attended to since. They grew—they are twenty feet or so in height; but they are only four inches through when they should be twenty or twenty four. They might yield an eighth of a cord of wood. I know maples of that age that will give three cords.

At this time of summer is the trying term of spring planted trees, and if well helped now they get a start for life. They should be mulched with straw, loose manure, hardwood sawdust, or some such material two or three—the last is better—in radius round the stem. Avoid fine chips or sawdust, they are hurtful. Another way is to keep the ground always lightly stirred

I would also remind your readers that at this time (the first part of August) they can plant, the period of summer growth being over, young evergreen trees. It will be found greatly to the advantage of agriculture to plant lines of these as windbreaks all along the north and west of farms. They should be taken from the bush when small, and planted at once—if the roots dry they will probably die, I lately wrote to the township clerks—a very intelligent body of men—in Ontario, asking what was the result of such windbreaks in their localities, and obtained several hundred replies that the effect was invariably good, and that in many cases the crop had been doubled where so sheltered.

Without desiring that in this country the tenant system of European lands may be introduced, I think we now begin to see that it has certain advantages. The owner of an estate, which he desires shall descend to his children, does not, in many counties, permit its woods to be destroyed or its most beautiful and valuable trees to be cut down that an additional wheat field or two may be obtained. He rather plants he hopes to leave it better than he found it. The yeomanry system, the system of many small farms, each tilled by its freeholder, has politically been through the best. Can we not combine the two? Can we not think of our farms as the Briton of his estate, and leave each its proper proportion of forest. As nothing is more ugly than a parallelogram of soil with a house in the corner, so nothing more beautiful than a form possessing its own richly waving woods, and rejoicing in its three sheltered fields. The last is fit to be a residence for anybody; the first—well the first is not.

Toronto Aug. 8. R. W. PHIPPS

ECONOMICAL STEAM ENGINES.

In selling steam engine attachments and improvements, the man who can demonstrate that his attachment is going to effect a large saving is the party who gets most customers. Unless there is some prospects of a device effecting a saving of from 10 to 50 per cent., few engine owners or steam users will listen to him. There are sometimes curious ways of proving that a saving has been effected. A well known engineering expert once had occasion to examine the engine of a steamer on one of the inland lakes. He found it in a bad shape, and wished to have some repairs done. The owner would not listen to the suggestions till he heard there was a probability of saving 20 per cent. of coal at a small outlay. The cylinder was badly out of round, and the practice was followed of jamming the piston packing in very tight to prevent leakage as far as possible. Owing to this the engine would not move till the boiler had a pressure of 20 pounds of steam. The expert had the cylinder bored out, and put in good steam packing. When that was done and the engine lined up, he had steam raised. So soon as there was ten pounds of steam shown on the gauge, he called out to cast off and get the boat out. The owner protested that there was no use trying to start out till they had more steam, but the expert insisted that there was steam enough, and the engine was started, and the boat moved out in good shape. The owner was so astonished at the immediate improvement that he paid for the work without any more trial.

The same expert wanted to put a balanced valve and some other improvements on a river steamer. The owner did not care to incur the expense, but was brought around by a promise that the engine would make ten more turns. The old valve was leaking badly and was not properly set, besides the engine needed lining up. The expert gave the engine a small overhauling at the time the balanced valve was put in, and had no difficulty in getting the additional ten turns. We believe that in a great many instances it will be found that the inventor expects to get part of his saving through his skill in selections not entirely connected with the device he sells.—*Dominion Mechanical and Milling News.*

WOOD-WORKING PATENTS.

The following list of patents relating to the wood working interests, granted by the U. S. Patent Office, August 11th, 1885, is specially reported by Franklin H. Hough, solicitor of American and foreign patents, 925 F. Street, N. W., Washington, D. C.:

323,900.—Lathe, dog—C. S. Beach, Cloversville, N. Y.

324,026.—Planing machine—J. F. Welsh, A. B. Hutchinson & W. H. Gray, Brooklyn, N. Y.

324,028.—Saw gummer—H. H. Ihsen, Allegheny City, Pa.

324,223.—Saw mill feed, mechanism for—A. W. Campbell, East Saginaw, Mich.

324,059.—Saw mill carriages feed, mechanism for—H. R. Wolfe, Louisville, Ky.

324,273.—Saw mill, reciprocating—A. Rodgers, Muskegon, Mich.

323,996.—Saw swage—H. R. Wolfe, Louisville, Ky.

325,912.—Saws, adjusting—R. W. Clarke, Auburn, N. Y.

ISSUED AUG. 18.

324,409.—Lathe—L. M. Nutting, Concord, N. H.

324,416.—Lathe—C. T. Reiss, Hamilton, Ohio.

324,380.—Saw—M. Brown, Bridgeport, Conn.

324,381.—Saw gummer—J. R. B. Hunt, North Troy, Vt.

324,576.—Saw mill set works—C. W. Metcalfe, Hopkinsville, Ky.

324,434.—Saw sharpening machine—J. H. Totman, Deseronto, Ontario, Canada.

224,701—Saw swage—W. C. B. Hummel, Winfield, W. Va.

RAFTS ARRIVED.

The Quebec *Chronicle* gives the following list of rafts arrived:—

Aug. 13.—Henry E. Hall, deals and plank, Hall's booms.

RAFTS ENTERED AT THE SUPERVISOR OF CULLERS' OFFICE.

Aug. 20.—Collins' Bay R. & T. Company, pine, sundry coves.

Timothy Nester, pine, Spencer cove.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c measured and culled to date:—

	1883.	1884.	1885.
Waney White Pine..	1,992,952	1,471,010	1,423,742
White Pine.....	2,813,964	1,837,056	1,368,294
Red Pine.....	300,309	249,593	57,193
Oak	1,354,544	546,792	1,169,242
Elm	248,761	637,893	856,750
Ash	196,336	375,316	226,423
Basswood	2,145	4,415	47
Butternut.....	989	1,121	3,033
Tamarac	4,916	18,033	2,163
Birch & Maple.....	137,249	185,111	386,263
Masts & Bowsprits...	—pcs	—pcs	—pcs
Spars	—pcs	41 pcs	17 pcs
Std. Staves.....	461.1.0.25	38.1.2.25	45.3.2.10
W. I. Staves.....	446.4.3.0	78.0.0.2	81.3.0.20
Brl. Staves.....	87.1.1.27	0.0.2.13	195.2.3.25

JAMES PATTON,
Quebec, Aug. 21. Supervisor of Cullers.

DRIVEN ON THE ROCKS.

San Francisco, Cal., Aug., 25.—Particulars have just been received of the wreck on Thursday of the British ship Huntingtonshire and the loss of eigeteen lives off Point Reyes, about forty miles north of Golden Gate. The scene of the disaster is a rocky promontory jutting into the Pacific from the western coast of Marin county. The ship sailed from Portland, Ore., some time ago for Liverpool, with a crew of twenty men and a cargo of 8,000 cases of Columbia river salmon and other merchandise. Soon after leaving port the captain accidently dropped the sextant overboard and consequently was unable to determine the position of the vessel. After losing the reckoning the ship drifted as far south as the equator, when striking a favorable breeze, she began to trace her way back to more northern latitude. While in the tropics four of the crew became incapacitated for work by reason of contracting fever. On arriving off the California coast for the second time the captain attempted to make the port of San Francisco, but the winds and currents were against him, and Thursday morning the ship was driven on the rocks at Point Reyes, where there is a lighthouse, and which was probably mistaken for the beacon at Point Bonita, which marks the entrance to this harbor. The ship and cargo are reported to be a total loss, and only two men are believed to to have survived to tell the tale of the terrible voyage and final disaster. The Huntingtonshire was a new vessel, built at Glascow, in 1884, her tonnage being 1,175. She was owned by F. Law & Co., of Glascow, whence she was despatched to Portland, Ore., where she took on board, on owners' account, a full cargo, consisting of 12,514 barrels of flour, valued at $50,000, and 8,000 cases of salmon. The vessel herself was valued at $60,000.

NOT TO BE FOOLED AGAIN.

A shepherd once to prove the quickness of his dog, who was laying before the fire in the house where he was talking, said to me in the middle of a sentence concerning something else: "I am thinking, sir, the cow is in the potatoes." Though he purposely laid no stress on these words, and said them in a quiet, unconcerned tone of voice, the dog, who appeared to be sleeping, immediately jumped up and, leaping through an open window, scrambled up the turf roof of the house from which he could see the potato field. He then (not seeing the cow there) ran and looked into the farm yard, where she was, and finding that all was right, came back to the house. After a short time the shepherd said the same words again, and the dog repeated the outlook, but, on the false alarm being a third time given, the dog got up, and, wagging his tail, looked his master square in the face, with so comical an expression of interrogation that he could not help laughing at him. On which, with a slight growl, he laid himself down in his warm corner, with an offended air, as if determined not to be made a fool of again.

A PRIVATE despatch received at Detroit last week states that the Canadian schooner Oriental, timber laden for Kingston, was waterlogged in Georgian Bay. One of the Moffat Line tugs was sent from Port Huron to her assistance. The Oriental was built at Garden Island in 1866, and is owned by the D. D. Calvin estate, Kingston.

THE Dominion Government have appointed Colonels Jackson, Whitehead, and Forrest, of Winnipeg, as commissioners to enquire into and report upon unsettled claims on the Militia Department on account of the recent rebellion in the North west.

PREVENTION OF DRY ROT IN TIMBER.

We recently published an article showing the cause of dry rot in timber, and amongst other preservation we referred to a paper by Mr. Boulton on its antiseptic treatment. As the subject is an important one to wood workers, we now gives the following: "The can be but two opinions as to the growing importance of studying the question of timber preservation, having regard more particularly to the reckless manner in which our own forests have disappeared and the little care that is bestowed on those of our colonies and the United States forests, as yet of vast area, but, nevertheless, thinning so rapidly as to be palpable to the most casual observer. It is true that the substitution of iron and steel for wood in the navies of the world has largely diminished the call for timber in that direction, but this diminution is made up for by the enormous extension of the railway system and the demand for sleepers and telegraph poles, as also for the piles necessary for the great harbor and reclamation works that are so numerous at the present day." Any information concerning the practical preservation of wood is therefore of extreme value, and Mr. Boulton's phamphlet (the result of a paper read last autumn before the Institution of Civil Engineers) is one which deserves careful study.

The appearance on a large scale of the dry rot in the ships of the British navy, at a time when they really were the wooden walls of old England, was naturally a subject of considerable alarm, when we know that a single seventy-gun ship required for its construction the oaks of 40 acres of forests, and therefore it was not to be wondered at that as early as the beginning of this century various proposals were made to stem the evil by the use of various salts of metals. The inquiry assumed more definite proportions, however, when the railway era was fairly inaugurated, and it was found that stone sleepers were too rigid to be useful, and several materials were experimented upon for timber preservation with more or less success. The first system of treatment was called Kyanizing, after its inventor, Mr. Kyan, and consisted of the use of corrosive sublimate. It answers the purpose very fairly, especially when the timber was in a dry situation, though it failed when tried under water. Moreover, corrosive sublime was found to be rather too volatile at ordinary temperatures, and too injurious to those who had to handle it. Marganizing, the system adopted by Mr. Margary, was the employment of the sulphate of copper, which appears to be the most reliable of all the metallic salts, and is still in use in France. Burnetizing (after Sir William Burnett) was the adoption of chloride of zinc, a good timber antiseptic, but very soluble in water. It is still in favor in Germany and Holland. Finally came Mr. Bethell's celebrated patent for creosoting, a bad name for the existing process by coal tar, as in reality creosote is a product of the destructive distillation of wood, which has never been used for timber preservation; and the only excuse for the name was because somebody discovered carbolic acid or phenol in both coal tar and wood distillation, so that it must be understood that creosote, in popular application to wood preserving, is not creosote, but oil of tar.

The basis of the action of all these remedies was supposed to be that they coagulated the albumen of the sap, and formed insoluble compounds that arrested decay; but as it has been proved by experience that the salts of metals are not so efficacious or so permanent as the tar-oils, the so called creosoting process has now for a considerable period out-lived its competitors. Even in France, where the sulphate of copper has held its own longer than anywhere else, partly because Dr. Boucherie injected the sulphate in a peculiarly ingenious manner, and partly because it was noted that the salts of metals became washed out in damp situations, even there the creosoting process has met with great approbation, since Forestire observed how thoroughly the timber was protected against the most troublesome pest, the teredo navalis. The oil used in creosoting is thus prepared. When coal is carbonized for gas making, the products given off are four, viz.: illuminating gas, ammoniacal or gas-liquor, coal tar and coke, all of them, in their several ways, of extraordinary commercial value, though, in the present case, the coal tar, a black, treacly looking substance, is all that we have to deal with. It may be mentioned, however, incidentally, that the waste or gas liquor is the parent whence the ammonia group is manufactured on a large scale. By distilling the coal tar, three separate groups of products are obtained: first, the oils which are lighter than water, such as napthas, which are of incalculable importance to the country, as from them are ultimately procured the aniline dyes; secondly, the oils which are heavier than water; and, thirdly, the pitch which is the residum of the distillation. The lighter oils form a category of themselves, quite distinct from the heavier ones, and have never been used for creosoting purposes; but they are extremely rich in their own particular constituents, yielding, amongst other results, the benzoles from which the aniline is obtained, the toluols, the solvent and burning napthas, and carbolic acid, whence is derived the picric acid used for fulminating purposes. The heavy or dead oils form the creosote of the timber-yard, and they were formerly treated *en masse*, though now each constituent can be separately removed according to its volubility. These dead oils are divided by the trade into two kinds, "London" and "country," the former being the bestillation from the best Newcastle coals, which are usually supplied to the south of England, and are much richer than other coals in semi solid substances, such anthracite, naphthalene, etc. The country oils, on the other hand, are distilled from the Midland coals, and are more volatile, besides containing a larger proportion of tar acids. In the earlier days of Bethell's patent, the heavy or dead oils were alone used, it being considered that the crude napthas were useless as antiseptics, and that the pitch from its solidity, would form an impediment to the injection; but the fashion gradually came into use of mixing a small percentage of country with London oils, as dilutents of the more solid material, and, in point of fact, the country oils became popular and mentioned in specifications.

The inspectors liked them because they were thinner and injected with less trouble, and also because the timber thus treated looked cleaner and less muddy. The late Dr. Letheby, too, gave a great impetus to the growing use of country oils, as he considered that the carbolic acid (which had been discovered in coal tar by Runge, in 1834) was the key of the whole position, and that the efficacy of the treatment consisted in the percentage of carbolic acid. It was his object, therefore, to exclude the naphthalene and para-naphthalene as of no value, but to exclude the lighter portions of the oils, viz., those which distilled between 360 deg. and 490 deg. F., as containing the tar acids in the greatest abundance. Here, again, incidentally, we may mention that this para-naphthalene, useless in timber preserving, has been found to ultimately yield anthracene, the parent of alizarine, that beautiful red dye that has so completely superseded madder in textile operations.

Dr. Letheby, however, did not have all his own way, for the investigations of De Gemini and Rottier, in France, and of M. Coisne, in Belgium, seemed to entirely disprove his conclusions. The latter gentleman, an engineer in the service of the Belgian Government, placed shavings in putrefying pit for four years, saturated with creosote containing respectively 15 per cent., 8 per cent. and 7 per cent. of tar acid, while one sample was of heavy specific gravity and held no tar acid whatever. This last experiment, however, was the most successful of all, and throughout the whole series it was evident that the results were in favor of the heavy oils, and that the tar acids were of no use at all. The Belgian government accepted Mr. Coisne's statement, and does not stipulate in its railway specifications for any tar acids, though it allows 30 per cent. of naphthalene, one of the very substances discarded by Dr. Letheby. Following an inverse method of examination, M. Coisne procured and analized some creosoted sleepers that had resisted decay for 20 years, and found no tar acids, but, on the contrary, plenty of naphthalene. Similar experiments were undertaken by Mr. Boulton, in 1882, on sleepers from various railroads which had been in use from 16 to 32 years, and his analysis, says the *Builder*, proved four things: 1. That no tar acids were detected by ordinary methods. 2. In the majority of cases the semi-solid constituents, such as naphthalene, were present. 3. Only small percentages remained of oils distilling below 450 deg. F.; all these facts proving that it was through the action of the heaviest and most solid portions of the oils that the preservation was effected. 4. He detected an alkaloid called acridine, which he thought played an important part in the action, it being undoubtedly a powerful germicide and solidifying within the pores of the timber, without evaporating or being washed out. Groville Williams also came to the conclusion that the antiseptic results of creosote were due more to the basis of alkaloids than to the tar acids, the former remaining while the latter seem to disappear. It is therefore most probable that it is this unfortunate quality of evaporation that disqualifies the tar acids, seeing that, taken per se, there is no doubt but the acids are powerful antiseptics, and that their presence arrests decay. Mr. Boulton's experiment shows that if tar acids and naphthalene be separately exposed at the same temperatures, the former will evaporate much more quickly than the latter; indeed, by repeated washings with cold water, both carbolic acid and cresylic acid (its near relation and a constituent of tar oil) can be completely disposed of, a most important fact in connection with the exposure of timber to sea water.

Viewing all these fact in their bearing upon specifications, it would seem as if the London oils, as they come from the still, are not sufficiently volatile, nor do they comply with the requirements as regards the percentage of tar acids. A pressure is, therefore, put upon the manufacturers to meet the case by taking out some of the heavier portion by which the bulk is rendered lighter and the proportion of the tar acids to the diminished bulk is increased. But Mr. Boulton considers that this is a mistake and would rather relegate the lighter portions of the tar acids, and especially carbolic acid, to their proper position as sanitary antiseptic, for which they are unrivalled, and would encourage the use of the heavier portions. He also with the joint creosoting specification of Sir Fredric Abel and Dr. Tidy, who resolved to exclude no semi-solid bodies which completely melt at 100 deg. F., and further changed the standard of volatility for 90 per cent. at 600 deg. F. to 75 per cent.

Without going into the vexed regions as to the exact relations of putrefaction and the germ theory, the conclusions drawn are, that the best antiseptics for timber are to be found amongst oils and bitumens, which fill up the pores of the wood. Of such bodies, those that contain germicides are to be preferred, and other properties being equal, those which either solidify in the pores of the wood, or which require an extremely high temperature to volatize them, and which are insoluble in water, are the best of all. With regard to the creosoting process Mr. Boulton lays great strength on the hygrometic condition of the timber at the time of injection, neglect of which has been the cause of failure. The power of absorption of moisture in woody fibres is so great, fir timber being able to keep up as much as from 60 gallons to 150 gallons of water to the load of 50 cubic feet, that it has always proved a great difficulty in the way of treatment, as the subjecting of the timber to a dry heat invariably results in injury to it. Mr. Boulton has, however, successfully met the difficulty by a most ingenious combination of air pump action with the use of creosote heated up to 212 deg. F. With charges of very wet sleepers, he has withdrawn water equal in volume of 50 gallons per load of timber, the water being replaced with an equal volume of creosote by the action the air pump alone.—*Woods and Forests.*

JOHN MCCOSHEN, a lumberman, of Ottawa, and a member of the firm of Fraser & McCoshen, fell dead in Lawlor's hotel, Levis, immediately after taking his breakfast on August 17th.

LEAKAGE AT TUBE ENDS.

Leakage at tube ends is one of the most frequent and annoying defects to which the ordinary horizontal and upright tubular boilers are subject, and while it is not necessarily on its first appearance dangerous, it indicates that something is wrong either in the construction or management of the boiler, and it should be attended to at once, for if neglected, the resulting corrosion of the head and tube ends will speedily induce a dangerous condition. Many explosions of upright tubular boilers have resulted solely from this cause.

Faults of construction may consist of insufficient rolling, or too severe rolling or expanding of the tubes, by which the ends may be split or cracked, so that it is impossible to keep them tight. The second defect is, perhaps, more frequent than the first. The feedpipe is also very frequently wrongly located in the head close to the tubes, and when it is, and cold feed water is used, the tubes in the immediate vicinity are almost sure to show a chronic leak.

A heavy coating of scale on the heads between the tubes is sure to set them leaking severely, as the water is thus kept away from the head and tube ends, and they become overheated. In this case the only thing that will do any permanent good is to remove the cause, that is the scale, when generally, if the defect has not existed for too long a time, the tubes may be rolled and made tight again. But a comparatively short time of severe leakage in this case is pretty sure to so severely corrode the ends that new tubes are required.

This collection of scale is also a fruitful source of burning and cracking of the back tube sheet. The front end of the boiler is not so much subject to this action, as the heat to which it is subject is not so intense.

The removal of a heavy coating of incrustation from between the tubes of a boiler is sometimes a matter of some difficulty unless due intelligence is used. With "staggered" tubes, very bad water, and where the boiler is worked hard, the case is much complicated, and the almost sole reliance is a judicious use of solvents, coupled with proper cleaning, as often as the boiler can be spared for the purpose. With properly arranged tubes, much help can be obtained by the use of proper chisels and scraping tools. Still no rule of procedure can be given that will apply to all cases. A thorough examination of each case is always necessary to determine the best method of procedure, and it is always easier to keep a boiler clean, than it is to clean it after it is badly fouled.—*Locomotive.*

DARKENING OAK.

To render new oak wainscoting and oak furniture dark, and give it an antique appearance, we have it from good authority that ammonia is the cleanest, best and cheapest material that can be used, says *Timber*. The liquid stains commonly used are apt to rise the grain of the wood, make it rough, and it is with difficulty evenly applied, whereas in the use of ammonia it is simply the fumes that color the wood, and do it so completely that it is difficult to tell whether the wood is really new or old A correspondent states that the following process of treatment is the best: "Oak is fumigated by liquid ammonia, strength 800°, which may be bought at any wholesale chemist's at 5s. a gallon. The wood should be put in a dark and air tight compartment, and half a pint or so of ammonia poured into a plate, and placed upon the ground in the centre. This done, shut the entrance, and secure any cracks, if any, by pasted slips of paper. Remember that the ammonia does not touch the oak, but the gas that comes from it acts in a wondrous manner upon the tanic acid in that wood, and browns it so deeply that a shaving or two may actually be taken off without removing the color. The depth of shade will entirely depend upon the quantity of ammonia used and the time the wood is exposed. Try an odd bit first experimentally, and then use your own judgment."

THE big mill at Deseronto during July cut 3,787,320 feet of lumber. This included two weeks cutting on hemlock, black ash and basswood, which are not so easily or expeditiously handled.

Chips.

MR. R. W. PHIPPS, Toronto, has gone to Massachusetts to gather information regarding forestry.

THE cut of logs on the Onconto river during the past winter was 43,000,000 feet against an average of 55,000,000 feet in previous years.

THE Duluth Lumber Company has this season sold 1,000,000 feet of lumber to the Port Arthur Lumber Company, of Port Arthur, Ont.

A STATEMENT is current in Washington Territory that 15,000,000 feet of lumber was recently cut off a single quarter section of land on Samish river.

TOMLINSON'S saw mill at Eastman's Springs took fire at a late hour on the night of August 13th, and was burned to the ground. A quantity of lumber was also destroyed. No insurance.

THE breakwater to protect the harbor of Port Arthur, Ont., north shore of Lake Superior, will be 2,000 feet long when completed. It will be composed of 20 cribs, built of 12x12 timbers, dovetailed and bolted.

ACCORDING to the custom house report, there was shipped from the port of Alpena, Mich., this year, up to July 31st, 78,860,000 feet of lumber, as compared to 67,500,000 feet for a corresponding time last year.

"WHEN I was a young man," says Josh Billings, "I was always in hurry to hold the big end of the log and do all the lifting. Now I am older I seize the small end and do all the grunting."

AMABLE MAROIS sustained some severe injuries in the cedar mill at Deseronto on Aug. 11th. He tripped over the rails and fell in front of the car load of sleepers, which ran over him severely crushing his back.

THE *Banner* says that the Messrs. McBeth Bros. & Co., of Craighurst, have purchased an extensive timber limit in the vicinity of Huntsville, Northern Ontario. The berth contains some seventeen square miles and is well timbered. McBeth & Co. intend taking out board timber for the Quebec market this fall and winter.

STRAME'S saw mill, at Fordwick, Ont., was burned on Aug. 11th with nearly all the stock of lumber. No insurance. The loss will be fully from $12,000 to $15,000. Four hours' hard fighting saved the Toronto, Grey and Bruce station, and all the buildings in reach of the mill. Mr. Strame got badly hurt.

E. NELSON and W. H. Strohn, for the Cheboygan Lumber Company, of Cheboygan, Mich., recently went to the Spanish river region, north of Georgian Bay, Ont., to investigate the feasibility of booming grounds on that stream. The company owns a large amount of pine on Spanish river, but will probably not log any of it the coming season.

DISINTEGRATION OF BUILDING STONE.

The sandstone commercially known as freestone, which is extensively used for building purposes in American cities, is subject to disintegration from the action of the sulpurous acid produced by the consumption of coal and from frost. There is much difference in the ability of various quarries to withstand these destructive influences. The outer surfaces of some buildings in New York and Philadelphia have been, by the advice of an eminent chemist, treated with a mixture of paraffine and carbolic acid with apparently good results. The flat surfaces are warmed by means of a stove like a plumber's stove, but with a flat side, and the paraffine when applied in a melted condition penetrates the stone readily, it is said that in some instances to the depth of one and one-half inches. Mouldings and carved wood are heated by means of a blast flame from India rubber bags of illuminating gas. Another process has been suggested, but the preliminary results do not appear to be of a satisfactory nature on account of its tendency to crack. In this process the mixture used is an artificial stone, and consists of three parts glass sand, three parts broken marble, two parts anhydrous clay, and two parts freshly slaked lime still warm. After a coat of the above has been applied wash it with water on the following day. The central portion and wings of the Capitol building at Washington were originally built of freestone, which disintegrated so rapidly as to threaten the permanence of the structure, and the whole was protected by several coats of white paint. The wings afterwards added to the above and now used for their House of Representatives and Senate Chamber, are built of white marble, which conforms in color to the central portion of the building, so the whole building appears to be made of marble.—*Engineering.*

To Prevent Rust.

A practical machinist says he has found the following mixture very effectual in preventing machinery from gathering rust: Melt together one pound of lard and an ounce of gum camphor. Skim the mixture carefully, and stir in it a sufficient quantity of fine black lead to give it a color like iron. After cleaning the machinery thoroughly, smear it with this mixture, and allow it to remain thus for 24 hours. Then go over it with a soft cloth, rubbing it clean. Treated thus machinery often retains its brightness for several months.

Market Reports.

TORONTO.

From Our Own Correspondent.

Aug. 24.—There is no change worthy of note in the state of the lumber trade here. The burnt district on the Esplanade will take considerable lumber to make all right again, but that is as a drop in the bucket, when taken into account with the amount of lumber arriving here daily. Lumber is being produced with a lavish hand as though it was a matter of the utmost moment to get the timber out of they way. This becomes more so year after year as the proportion of good to common becomes less, the anxiety to produce sufficient clear to meet the demand causes a large overstock of the coarser grades; and another strange feature of the trade is, that although there is no overproduction of bill stuff, the manufacturer persists in cutting inch lumber, the coarser grades of w'h sell on this market, by car load, at $8.50 to 10,00 per M, which if cut into bill lumber would readily command $11.00 per M, say nothing as to the extra time involved in cutting and waste in sawdust.

Basswood, which has usually commanded heavy sale on this market, has become nearly a drug. It is true sales of No. 1 and 2 can be effected at, say $14 00 on rail or vessel here. And this inspection, as carried out, means a perfect article, leaving over 50 per cent of the stock on the manufacturer's hands to get rid of as best he may. The American dealer is not to blame for this, over production is at the root of the whole matter. Mill men cannot look forward, as the farmer does, to reproduction in the future, when the supply of time is done that upon which he depended for a return of his capital is gone, and he must pull up stakes and move to fresh limits, and year after year this insane desire to get rid of our valuable timber increases, and future generations will mourn over the folly of their predecessors.

There is quite a limited quantity moving over our docks, but the local market is full up, and competition keen as ever, and it is not an unfrequent occurence for two or even three lumber dealers, or salesmen, to meet at a retailer's office, each making lower offers in order to secure a sale. So if the old proverb of competition being the life of trade is true, there should be any amount of life in the lumber trade here at present.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	13 00
Scantling and joist, up to 16 ft	13 00
" " " 18 ft	14 00
" " " 20 ft	15 00
" " " 22 ft	16 00
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	20 00@23 00
" boards "	20 @
ound dressing stocks	16 00@18 00
Picks Am. inspection	30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1-inch flooring, dressed	25 00@30 00
1 " " rough	14 00@15 00
1 " " dressed	23 00@25 00
1¼ " " undressed	14 00
1 " " dressed	16 00@20 00
1 " " undressed	12 00@14 00
½ Beaded Sheeting, dressed	18 00@20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ₱ M	@
Sawn Lath	2 25
Red oak	20 00@25 00
White "	25 00@30 00
Basswood, No. 1 & 2	18 00@20 00
Cherry, No. 1 & 2	50 00@60 00
White ash 1 & 2	25 00@30 00
Black ash 1 & 2	20 00@25 00

MONTREAL.

From Our Own Correspondent.

Aug. 24.—Business for the past month has been fair, but rather quieter than for the previous one, but the business for that month was much larger than for the corresponding one of last year. Arrivals are about equal to last year. The demand from the United States for good lumber is still active, but coarse lumber is plentiful and in rather over supply. Prices remain very steady and we cannot make any change in quotations. We still quote ex yard as follows:—

Pine, 1st quality, ₱ M	$35 00@40 00
Pine, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	10 00@12 00
Pine, mill culls, ₱ M	7 00@ 9 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	20 00@25 00
Bass, " " ₱ M	12 00@18 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	25 00@35 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@35 00
Lath, ₱ M	1 00@ 0 00
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

CORDWOOD.

The demand has been poor, but prices remain firm, and retail prices are rather better, and for wood delivered fully $1.00 is obtained on our wholesale prices. Arrivals are not very large but still ample for existing demand. We quote as follows on the wharf ex cartage:

Long Maple	$ 5 00
Long Birch	4 50
Long Beech	4 00
Tamarack	3 50

LIVERPOOL MARKETS.

Trade has been inanimate, and in Quebec goods the import has been on a fair scale, but no wholesale transactions have transpired. There have been private sales of Dalhousie, N. B., spruce deals, at £6; New Richmond, N. B., at £5 7s. 6d.; Richbucto, N. B., at £5 16s. 3d. and £5 17s. 6d. Auction sales of St. John, N. B., averaged £6 3s. 6d. and Halifax, N. S., £5 19s.

CHICAGO.

BY THE CARGO.

The *Northwestern Lumberman* of August 22nd says:—The port list shaws 222 cargo arrivals for the week, a considerable increase over the week preceding. The Monday morning fleet was not a large one, nor has there been a very crowded market all the week, leaving the inference that a large number of loads coming to port have gone directly to the yards. There has been a slight decrease in the amount of shingles arriving during the past few days, owing, no doubt, to the drop in prices. A number of cargoes of dimension from Lake Huron ports have put in an appearance, with a limited amount of coarse inch. The dimension has comprised considerable long stuff, that is seeking a market here in response to the cry of scarcity and the late advance in prices for that description of lumber. It is also likely that there has been a large amount of dimension bought at Huron ports, that has gone to the yards direct, and this cut no figure on the market. The condition of the market may be charaterized as firm on long dimension, somewhat lower on short green piece stuff, the same on the poorer qualities of No. 2 inch stock, but fairly firm for medium and No. 1 lumber.

Short green dimension is 25 cents a thousand lower than it was ten days ago. The decline was intimated last week, but how become pronounced and acknowledged. It is a great disappointment to the mill men, and it is not relished with a sharp appetite by anybody at this season of the year. It started with an overload at the time a holiday and Sunday came together, followed by a continuance of northerly winds that brought vessels into port from various points down the lake. The market was overloaded by bunching cargoes at an unfortunate time. The presence of vessels from Lake Huron ports that are not commonly represented market have served to depress prices. But there is no law to keep them out, nor will they stay away as long as this is the only market that will readily dispose of stock in a dull season.

Short green dimension that was last year quoted at $8 75 to $9 can now be priced at $8.75 with occasionally a poor cargo selling at $8 50. A fair to good lot sells for $8 75. Long lengths, when bought separately, which is the rule at present, sell at a great advance on prices that prevailed in the spring. Such stuff as 2x12, 22 to 26, and 3x12 and 3x14 of long lengths, brings $13 to $14. Long length of 2x6, 2x8 and 2x10 are not so valuable, but if found liberally sprinkled in a cargo of stuff that sells for short dimension, the value of the load is thereby raised.

The majority of strictly No. 2 stock sells at $9.50 to $10, though there is stock, particularly if cut to order, that sells as high as $11. We hear of a cargo this week that changed hands at the latter figure. The range on the coarser quality of No. 2 stock is lower by 25 cents a thousand than it was ten days ago.

No. 1 boards and strips are tolerably firm in in value, though purchasers discriminate more sharply than they did earlier in the season. An instance or two in which cargoes of No. 1 sold at prices too high for the quality of the lumber, as showed up when unloaded, has made the yard men wary of inspection at distant ports. But when lumber is offered from well accredited log stocks and mills, it sells at good prices. A cargo from Muskegon was sold on Thursday at $18 a thousand, and some has lately been sold at $18.50. High grade boards and strips have been sold this season at $23 and $24 a thousand.

The late boom in shingles has subsided to some degree. Shingles that sold two or three weeks ago at $2 a thousand can now be bought at $1 90. Extras have dropped about 7 cents a thousand.

Quotations on lumber and shingles are as follows:—

Dimension, short, green	$ @ 8 75
" long green	11 00@13 00
No. 2 boards and strips	9 50@11 00
Medium stock	13 00@15 00
No. 1 stock	16 00@18 00
Shingles, standard	1 90@ 2 05
Shingles, extra	2 05@ 2 25
Cedar	1 65@ 1 80
" clear	2 15
Lath	1 20@ 1 50

Lake freight rates are quotable as follows:

From Grand Haven, dry	$ 1 12½
From Muskegon, by steam	1 12½
White Lake, dry	1 25
Ludington	1 25
Manistee	1 25@1 37½
Frankfort	1 50
Menominee	1 37½
Cheborgan, Duncan City, St. Ignace	1 37½
Alpena	1 5'
Manistique	1 50

AT THE YARDS.

It is an encouraging feature of current trade that while there are still dealers to be found who complain of dullness, none deny that trade is steadily increasing. This an important point gained among men who have acquired such a croaking about slow trade that it has become chronic. It sometimes requires considerable effort to screw the confession of a better business out of one of these gloomy minded men, but the result is worthy of the effort. In making these observations it should be distinctly understood that is not insisted that trade is as profitable as it should be; reference is only had to the amount of lumber going into distribution.

As an indication of the views of some dealers in regard to prices can be stated that travelling salesmen have been sent out with instructions to get list prices, or very nearly, or refuse orders. Some have returned, having carried out their instructions. Such were unable to sell but little lumber, for the reason that retail dealers still think that it is safe enough to buy for immediate wants only. Occasionally a dealer is found who is making no extraordinary effort to sell lumber, believing that he cannot urge sales without making concessions, and being unwilling to do so for the reason that he expects an advance in the near future.

Receipts of lumber, shingles, etc., from Jan. 1st to August 20th as reported from the Lumberman's Exchange:—

	RECEIPTS. Lumber.	Shingles.
1885	61,844,000	24,701,000
1884	48,905,000	22,735,000

FROM JANUARY JAN. 1, 1885, TO AUG. 20, 1885, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1885	946,757,000	367,953,000
1884	1,091,756,000	519,477,000
Decrease	143,999,000	151,524,000

STOCK OF HAND AUG. 1.

	1885.	1884.
Lumber & timber	491,378,818	555,463,973
Shingles	312,749,770	321,872,304
Lath	82,343,350	61,682,455
Pickets	1 963,154	1,054,729
Cedar posts	737,320	777,658

LAKE RECEIPTS FROM JAN. 1 TO AUG. 20.

Lumber	906,396,000
Shingles	338,504,000
Lath	24,254,000
Wood, cords	17,443
Posts	2,463,054
Railroad ties	1,125,455
Slabs, cords	20,087
Bark, cords	11,887
Poles	37,200
Spiles	1,500

OSWEGO, N.Y.

From Our Own Correspondent

We change quotations on cedar shing. s—no other change to make.

Three uppers	$42 00@40 00
Picking	32 00@35 00
Cutting up	24 00@26 00
Fine Common	22 00@25 00
Common	14 00@18 00
Culls	11 00@14 00
Mill run lots	16 00@22 00
Sidings, selected, 1 in	30 00@35 00
" 1¼ in	32 00@30 00
Mill run, 1x10, 13 to 16 ft	10 00@21 00
Selected	21 00@24 00
Shippers	14 00@10 00
Mill run, 1¼x10	17 00@20 00
Selected	21 00@30 00
Shippers	14 00@10 00
Mill run, 1 & 1¼ in, strips	15 00@18 00
Selected	22 00@30 00
Culls	11 00@13 00
1x7 selected for clapboards	25 00@35 00
Shingles, XXX, 18 in. pine	3 50@ 4 00
XXX Cedar	2 50@ 3 00
Lath 1¼, No 1	1 50@ 1 00
No 2	1 00@ 1 25

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₱ M	$50 00@53 00
Pine, fourths	45 00@48 00
Pine, selects	40 00@45 00
Pine, good box	22 00@33 00
Pine, common box	11 00@13 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in.	00 28@00 32
Pine, 10-in. boards, culls	00 16@00 20
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16ft	28 00@32 00
Pine, 12-in. boards, 13ft	28 00@00 00
Pine, 1¼ in. siding, select	40 00@43 00
Pine, 1¼-in. siding, common	15 00@18 00
Pine, 1-in. siding, select	40 00@42 00
Pine, inch siding, common	13 00@15 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 22
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Black walnut, gook, ₱ M	100 @120 00
Black waluut, 1 inch	80 00@90 00
Black walnut, 2 inch	00 00@85 00
Scaymore, 1-inch	28 00@30 00
Scaymore, 2-inch	21 00@23 00
White wood, 1-inch and thicker	38 00@40 00
White wood, 2-inch	28 00@30 00
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@30 00
Oak, good, ₱ M	40 00@42 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	20 00@23 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	4 30@ 4 50
" clear, "	0 00@ 3 00
" cedar, mixed	0 00@ 3 30
" cedar, XXX	0 00@ 0 00
" hemlock	2 25@ 2 37
Lath, hemlock, ₱ M	0 00@ 2 13
Lath, spruce, "	0 00@ 2 25

BUFFALO.

We quote cargo lots:—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@13 00

LIVERPOOL.

The *Timber Trades Journal* of Aug. 15th says:—The recent strong westerly and southerly gales have brought up the Channel during the past week a large number of timber and deal laden vessels, so that the quays are now well filled up with cargoes discharging and the docks with vessels waiting for berths. With all this pressure there does not, however, seem to be any marked increase in the consumption, although there is naturally under such circumstances a considerable quantity being forwarded to consumers under contracts made to arrive.

Moderate as the stocks are, taken as a whole, prices show no general tendency upwards, though in some cases there is an improvement.

This was shown at the auction sales of Wednesday, when spruce deals showed a distinct advance over previous rates, although perhaps, objection may be raised that the quantity offered was so small as to render the result hardly a safe criterion of the market.

Sawn pitch pine timber also showed some improvement, although a good proportion of the cargo offered was withdrawn; this was solely owing to the firm attitude of the broker, who declined to let the various lots go under reasonable limits.

GLASGOW.

The *Timber Trades Journal* of August 15th says:—Parcels of deals continue to arrive here per steamers from Quebec and Montreal. The quantity imported since the season began is about the same as during corresponding period of last year, viz., 1885, 158,859 pieces, and 1884, 163,467 pieces.

The Clyde ships engaged in the Quebec log timber trade are slow of arriving at Greenock; the import list for the past week includes one other, making seven cargoes from Quebec since the season began, as compared with 12 at this time last year. The winds in the Atlantic are reported light and variable, and the passages are therefore longer than usual.

The demand at present being restricted by dull trade it is well that the import should be on a correspondingly limited scale, and already it is evident that this year's import to Clyde will, on the whole, be much smaller than the average. Pitch pine is an important item, and at present it shows about a third under the usual total import at this date.

A public sale of timber, which was well attended, took place at Greenock on the 6th inst., result as undernoted. There are some oncoming sales of deals, Quebec and lower port.

AUCTION SALE.

On 6th inst., at Greenock, Messrs. Allison, Cousland & Hamilton, brokers:—

		Per c. ft.
Quebec Waney boardwood—		
80 logs 50 c. ft.	avg. per log	2s. 3d.
20 " 46	"	1s. 11d.
20 "	"	1s. 9d.
Quebec Yellow pine—		
35 c. ft.	avg per log	1s. 6d.
Quebec 2nd yellow pine deals—		
9 ft.	7/10×3	2s. 6½d.
Quebec 2nd yellow pine ends—		
6 to 8 ft.	7/21×3	2s. 0½d.
Quebec 4th yellow pine deals—		
14 ft.	3/10×3	11½d.
13 to 23 "	12/21×3	11½d
13 "	7/10×3	11d.
12 "	7/24×3	11d.
15 to 17 "	7/19×3	11d.
9 to 11 "	7/20×3	9½d.

TYNE.

The *Timber Trades Journal* of Aug. 15th, says:—The arrivals of the past seven days have again been on a smaller scale, although amongst the number there are several goodsized cargoes of wood goods. Amongst them there are three Quebec cargoes, two from Doboy with pitch pine and several steamers with assorted cargoes from Norway and Sweden. A few cargoes of Quebec goods are off the coast, and will be dropping in with more or less frequency for the next two or three weeks, but of sawn goods from Norway and Sweden the greater part of the expected cargoes are now to hand, and there are few or no inquiries abroad for ships to load this season.

There is nothing new to report in the state of trade generally in the district; so far as the trades which mainly effect the timber trade are concerned there is nothing new to say regarding them, they are as low and feeble as it is possible to conceive. The only trade using timber which may be called busy is the housebuilding, and this is now showing less activity than it was two months ago.

So far the importations of this season have come forward in fairly good condition; complaints of inferior quality or bad condition have been fewer than formerly.

LONDON.

The *Timber Trades Journal* of Aug. 15th says Things at the London docks, as elsewhere, continue very quiet, and, though some big cargoes have come forward, the want of bustle on the Thames is very noticeable. It is expected that the shortage in the supply between this and last year on Baltic deals alone with the present season amount to over a million pieces.

There is really nothing just now to stimulate speculation, and trade is seemingly being carried on at little or no profit. In the winter we shall doubtless see London prices much harder, but the interim for realization, in this age of steam, is, after all, not a very lengthened one, though the trade will doubtless turn it to good account.

The decline in the weekly rate of consumption on deals, &c., is becoming more noticeable from time to time; 789 standards of deals less were delivered last week than the previous one and 163 standards of flooring besides 127 loads of floated timber. There was a very similar dimunition in the corresponding week's deliveries last year, as if indicative of some slackening of the wheels. Of trade just at this time of the year comparing the week's deliveries with those of same date twelve months since, 1884 has the advantage of us by 314 standards of deals, but on flooring we gain by nearly 100 standards, though short on floated goods 125 loads or so. On the total deliveries since the 1st of January we are short of last year's consumption to the extent of 12,678 standards of sawn wood, though we have the advantage on floated timber by 700 loads that have been delivered up to date.

CARDIFF.

The *Timber Trades Journal* of Aug. 15th says:—Since last week we have had several arrivals; one small cargo of deals from Darien, a pretty large cargo from St. John, one good sized cargo of deals from Bridgewater, one from Quebec with timber, another moderate-sized cargo of deals from St John, in all about 300 to 400 stds., one arrived with timber from Pensacola, and two of deals from Archangel, besides one market cargo in the Roads from West Bay, sold to Cardiff merchants, but we do not know yet where she is to discharge, whether here or at Sharpness.

So far the stocks have not increased anything to speak of, as a good deal of the wood has gone off to the Midlands, and we understand there is more sold for that district; but Sharpness will begin to play an important part in this direction, as we learn that Cardiff merchants can sell cheaper at Sharpness for transportation to the Midlands than they can accomplish from Cardiff—in fact, one of our large firms has established a branch office at Gloucester on this account; so that it now rests between the dock and railway companies to reduce their rates in order to secure the trade from here.

WEST HARTLEPOOL.

The *Timber Trades Journal* of August 15th says:—The demand continues of a very quiet and steady nature. We, however, anticipate that a fair proportion of Quebec goods will be loaded up for orders ex ship, as very light stocks of this kind of wood have been seen here for some time past. There is also a better demand for the higher class redwood goods than for those of inferior quality, but taken as a whole the bulk of the recent imports are going into yard, and stocks are rapidly increasing. In the large timber department orders have been more plentiful; the principal business doing is in Stettin oak and pitch pine timber (both sawn and hewn), whilst a few good orders have been held for Swedish fir; in mining timber also a slight improvement has been seen in the weight of orders loaded up. The freight market continues dull and without any sign of improvement.

WINNIPEG.

The *Commercial* of Aug. 15th says:—In the lumber business during the past week there cannot be said to be much improvement if any on the preceding one. There has been some demand noticed, but the orders coming in are not of any very great extent, and are easily filled, as most of the mills appear to be working along steadily, while although we do not hear of any actual cutting being done by the trade, prices are evidently anything but firm.

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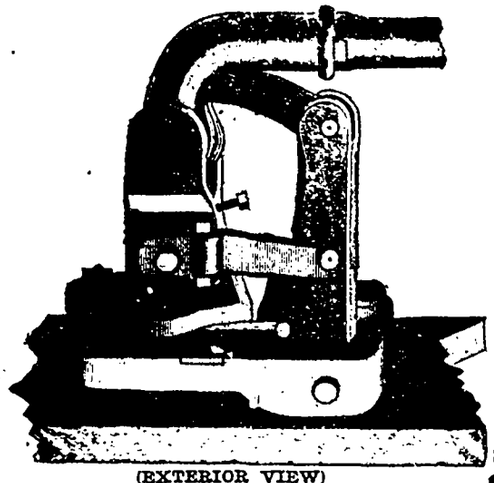

(EXTERIOR VIEW)

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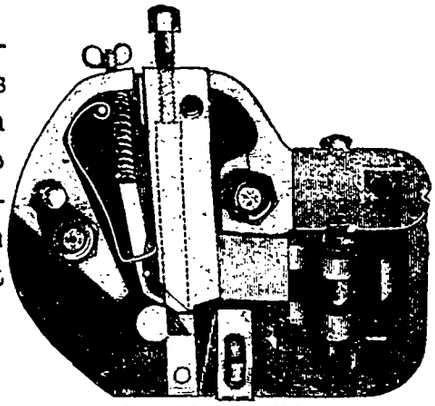
This SWAGE has been constructed to fill any conceivable wish of those who are favourable to, and think it the only kind that can be successfully used. There is no Swage of the kind on the market that will do as perfect and satisfactory work as this, and in so saying, I know what I am talking about.

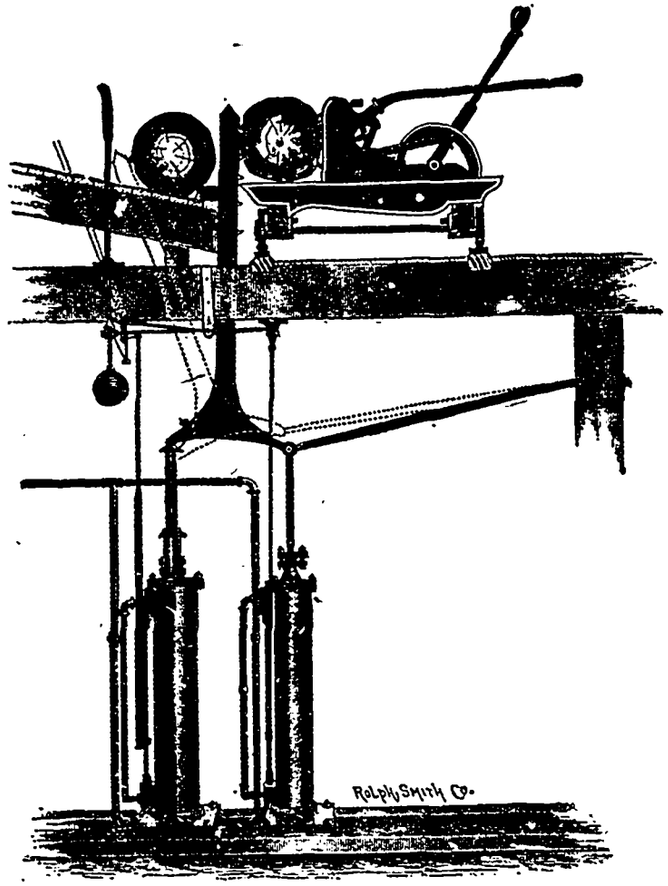
TRY IT!

Price $100, Cash 30 days.



(INTERIOR VIEW)

THE KALAMAZOO STEAM "NIGGER"

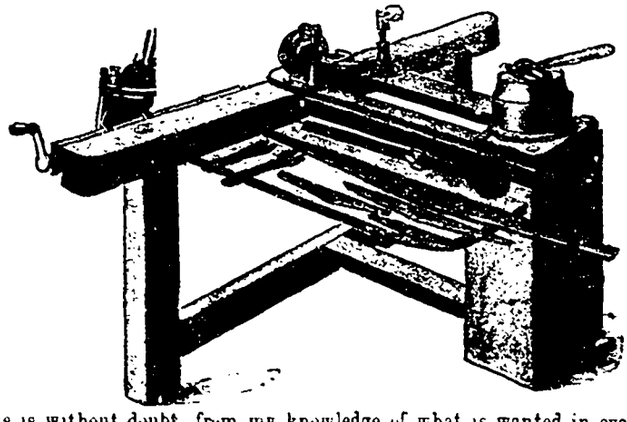


It is four machines in one—Log Loader, Log Turner, Hand Spiking Machine, and Machine for Springing Timber Straight on Sawmill Carriages. It saves time, which is money. Is durable, being made entirely of iron, steel and brass. It is very quickly and easily controlled, the machine being worked by direct steam, is elastic in its movements (thereby obviating its liability to breakage) which is a very desirable point in a machine. By using this machine your circular mill will saw from five to seven thousand feet more per each eleven hours, according to cutting capacity of mill. We guarantee this machine to be first-class in workmanship, durability and utility. It has given entire satisfaction to every one using it. They are very cheaply set up in mill requiring only a base for the cylinders on lower floor, and no bridge-trees shafting, boxes, pulleys, belts or chains. Both cylinders are supplied with steam by a one and a half inch steam pipe. It requires less steam to work it than it takes to overcome the friction on the old style friction turners. It works only while turning or loading logs—balance of time it is entirely idle. Another important use to which we direct your notice, is in springing and straightening long timbers. We would be pleased to receive your order for one or more of the above Machines, feeling confident that it will give you entire satisfaction.

We Guarantee each Machine in every Particular.

Covel's Improved Saw Bench

Price $50, Cash 30 Days.



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This is without doubt, from my knowledge of what is wanted in every mill, together with the many testimonials I have received from those using them, the best outfit for hammering and the general care of Saws, that has ever been introduced, and accompanying each Bench is my "Handy Guide" book, giving all necessary instructions how to remedy any and all defects in the Saw. I have added improvements to it since I got the cuts out represented in the "Handy Guide" and done away with some parts there represented, leaving the Bench a model acquisition or the File Room.

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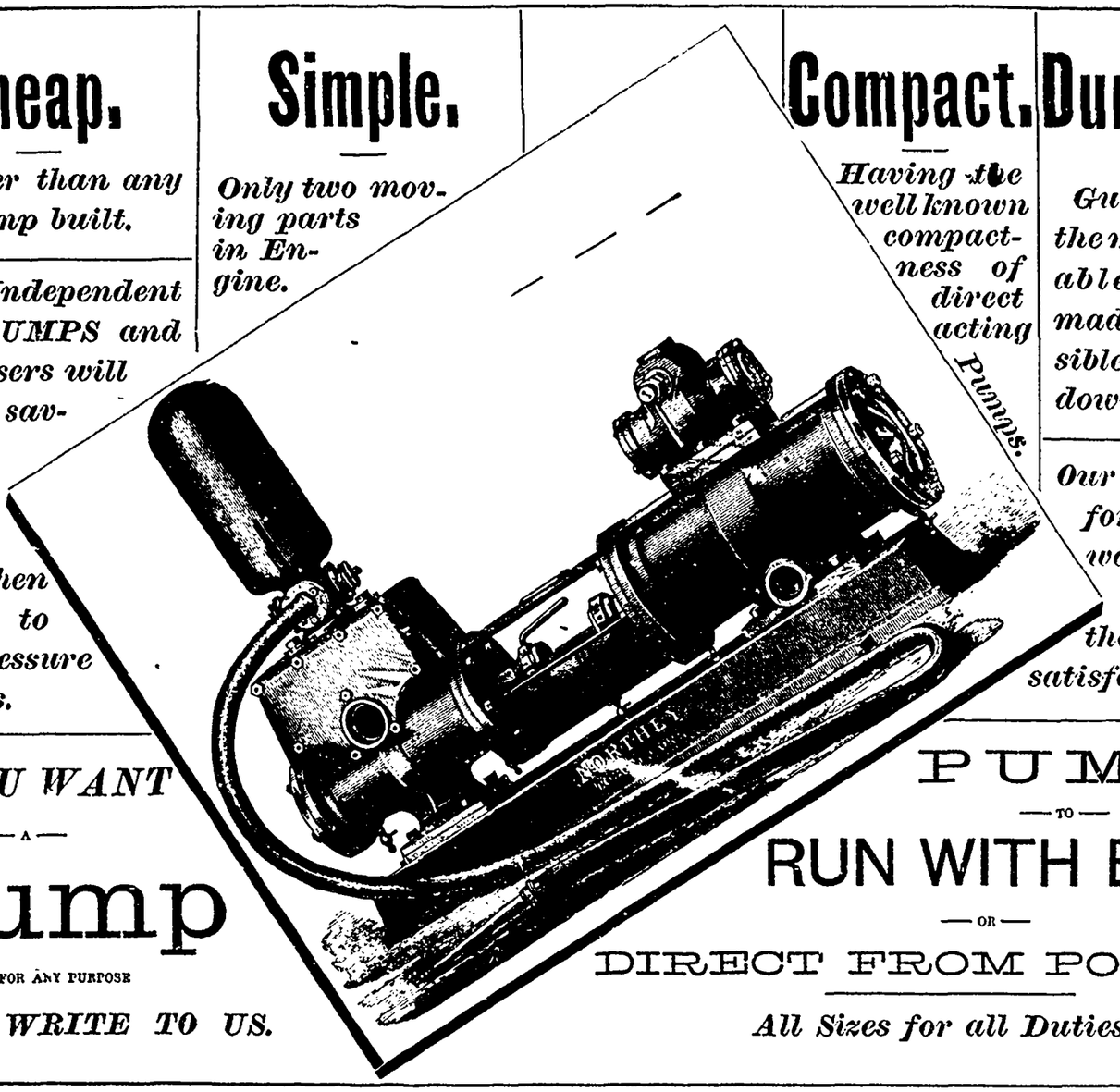

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DIRECT FROM POWER

All Sizes for all Duties.

Our make of Pump is specially adapted to Mills in out of the way places, as they can be absolutely relied on, and occasion no vexatious stoppages for repairs.

WE INVITE CORRESPONDENCE ON ANY POINT CONNECTED WITH PUMPS.

SEND FOR CIRCULAR AND STATE YOUR REQUIREMENTS.

NORTHEY & COMPANY,

Croner FRONT & PARLIAMENT STS, TORONTO, ONT.